

**THE RAILWAY GAZETTE**  
 A Journal of Management, Engineering and Operation  
 INCORPORATING  
 Railway Engineer • TRANSPORT • The Railway News  
 The Railway Times • Herapaths Railway Journal • RAILWAY RECORD.  
 RAILWAYS ILLUSTRATED ESTABLISHED 1835 • THE RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY

33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1

Telegraphic Address: "TRAZETTE PARL., LONDON"

Telephone No.: WHITEHALL 9233 (7 lines)

Annual subscription payable in advance and postage free

British Isles and Abroad.....£2 5s. 0d.

Single Copies .....One Shilling

Registered at the General Post Office, London, as a Newspaper

Vol. 76 No. 16

FRIDAY, APRIL 17, 1942

## CONTENTS

	PAGE
Editorials .. .. .	473
The Scrap Heap .. .. .	477
Overseas Railway Affairs .. .. .	478
Road Transport Section .. .. .	479
New 0-6-0 Freight Locomotives, Southern Railway .. .. .	483
Railway News Section .. .. .	487
Personal .. .. .	487
Transport Services and the War .. .. .	489
Stock Market and Table .. .. .	496

## GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are necessarily available for export

## NOTICE TO SUBSCRIBERS

Consequent on further paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list which will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions

## POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and facilities for such dispatch.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

## REDUCTION IN SIZE OF PAGE

To economise in paper our readers will observe a slight reduction in the size of THE RAILWAY GAZETTE in that the size of the page has been reduced from 9 in. x 12 in. to 8½ in. x 11½ in. The type area of the page remains the same, namely, 7 in. x 10 in., but the surrounding margins have been reduced. This of course detracts from the appearance of the paper, but is one of the exigencies of the war

## TO CALLERS AND TELEPHONERS

Until further notice our office hours are:

Mondays to Fridays 9.30 a.m. till 5.30 p.m.

The office is closed on Saturdays

## ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

## ERRORS AND MISPRINTS

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time

## Government and Industry after the War

THERE can be few who doubt that Government control of industry will continue at least for some time after the war and, indeed, it is not unlikely that it will be desirable that it should do so during the period of transition which must elapse before the country is again on a normal peacetime basis. There will be few, however, who will go so far as to share, in their entirety, views expressed by Mr. Samuel Courtauld in the latest number of the *Economic Journal*. It is possible, of course, that this prominent industrialist has deliberately expressed his views on highly controversial questions in order to stimulate discussion of them, and if that is so, he has achieved a useful purpose. There can be no doubt that Mr. Courtauld is on firm ground when he declares that Government bureaucracy has proved itself incapable of conducting business efficiently and that if it is to continue to take any part in the running of business it must be reformed radically. On the other hand, those who have had experience of Government control will not welcome his view that industries have now grown so large that it is the duty of the Government to control them with the utmost vigilance and to give them orders in crises other than war.

## Time Confusion Eliminated in North America

Traffic and operating officers of the Canadian and U.S.A. railways must have been greatly relieved when 2 a.m. on February 9 was passed. Thereafter, train departure and arrival times as given in the timetables accord with all public clocks, as "time" now means just one time only, namely, the zone time governing the movements of everyone throughout North America. As summer time heretofore has been a matter of local option in both Canada and the U.S.A., trains have been scheduled officially on Standard time, and timetables have shown times one hour different from the clocks in towns adopting summer time. The necessity of indulging in mental arithmetic exists no longer. The changeover from the old time to the new involved an enormous amount of study and work on the part of railway officials. Schedules had to be adjusted in the light of public convenience and operating necessity, timetables prepared, and staffs in every city, town, and hamlet fully and completely advised. At, or immediately before, the zero hour of 2 a.m. on February 9, all Canadian trains in transit halted at the nearest stations, when all railway clocks were adjusted on telegraphic instructions; all watches carried by engine drivers, guards, and other members of train crews, were adjusted and checked before the trains were allowed to proceed, on new clearance orders issued by the train despatchers. The travelling public has for years been educated to differentiate between daylight and standard times, but this problem has now disappeared.

## Fraudulent Railway Passengers

No measure short of the impracticable one of having every train inspected by examiners, can ever protect the railway companies from the ticket frauds perpetrated by a certain class of passenger. There is seemingly no limit to the number of dodges or the scope of ingenuity known to those who appear to consider cheating the railway as an achievement, and indeed something on which they can congratulate themselves. According to them the only thing to be condemned in practising the "art" is allowing themselves to be caught and, as is well known, for every one punished for the offence many escape. The abolition of first class accommodation on numerous trains has done something substantial towards preventing the fraud of riding in the superior class while holding a lower class ticket, but even now on trains which still retain the first class, cases are being reported of passengers riding first until just before reaching the station at which tickets are examined, and then changing into third. In addition there is the injured innocent type of passenger who either "didn't know" it was first class or else was "under the impression" that all trains were in effect third

class only. This last, however, is now wearing rather thin. At one time, not very long ago, a considerable amount of fraudulent first class travelling was suspected on suburban trains running into a London terminus where tickets were taken at the barrier and to cope with this, plain-clothes men were instructed to mix with the passengers and follow those about whom they had doubts, and who had been seen alighting from first class compartments, to the barrier where it could be seen what tickets they held. On one occasion an employee who had only recently been transferred to this work was complimented on his alertness by the passenger he followed. It happened to be the General Manager of the company.

### Overseas Railway Traffics

In the 39th and 40th weeks of the current financial year the four principal Argentine railway companies record substantial decreases in traffic receipts. The fall in Central Argentine earnings during this period is 893,100 pesos, that of the Buenos Ayres & Pacific is 742,000 pesos, while the Buenos Ayres Great Southern is down 429,000 pesos, and the Buenos Ayres Western is down 296,000 pesos. Relevant factors in the situation were exceptionally heavy rains in the 39th week and in the 40th week of 1942 the incidence of Holy Week compared with an ordinary week in 1941. On the Argentine North Eastern, however, there was an increase of 37,800 pesos in the two weeks, and the Entre Rios showed an improvement of 46,900 pesos.

	No. of week	Weekly traffics	Inc. or decrease	Aggregate traffic	Inc. or decrease
Buenos Ayres & Pacific*	40th	1,601	-337	57,193	+1,226
Buenos Ayres Great Southern*	40th	2,746	-42	97,354	-9,308
Buenos Ayres Western*	40th	814	-182	34,037	+3,783
Central Argentine*	40th	1,809	-435	70,360	-7,706
		£	£	£	£
Canadian Pacific	13th	1,396,000	282,200	11,528,800	2,446,200

\* Traffic returns in thousands of pesos

Gross earnings of the Canadian Pacific Railway for the first two months of 1942 amounted to £7,379,600, an increase of £1,621,000, and the net earnings of £1,239,600 showed an improvement of £184,800.

### Preparations for Swiss Railway Centenary

Preparations are being made in Switzerland to celebrate in five years' time the centenary of the introduction of railways in that country, as it is realised that the collection and examination of the necessary information, photographs, documents, and so forth, for which a general appeal has been issued at Zurich by a special committee, under the patronage of the Federal Authorities, will take a considerable time. The issue of a handsomely-illustrated history of the Swiss railways is contemplated. The modest railway museum, housed for some years at the Zurich goods station, is to be enlarged considerably and transferred to a new building better suited to the purpose. In addition to the main museum, it is intended to set up travelling collections of exhibits to extend the celebration to all parts of the Confederation. A good deal of information on the origin and development of this interesting part of the European railway system, which forms such an important international link, must be in the possession of engineers in other countries.

### A Displaced Steel Plate Causes Disaster

A summary of Mr. J. L. M. Moore's report on the serious accident at Bighton, L.N.E.R., on the night of February 11, 1942, when a steel plate that had become displaced in shunting without those concerned noticing it cut through the sides of some coaches of a troop train, killing 14 soldiers and seriously injuring 35, appears on page 492. There was no great doubt about any of the facts, and Mr. Moore concludes that the guard who was dealing on the ground with the plate wagon as it was being loose-shunted into a siding, could not have applied the brake, so that it struck the vehicles ahead, although in no excessively heavy way, yet sufficiently to produce the dislodgment of the plate. Nevertheless he takes a very lenient view of the case, rightly pointing out that a man so situated has to decide in a few

seconds as a vehicle approaches what to do for the best and is working, certainly in hours of darkness, at much disadvantage. The blame, if any can really be laid to the man, cannot in the least be measured by the casualties and damage which unfortunately followed. These were the result of a combination of circumstances not associated with the primary cause of the accident. The method of loading plates followed in this instance has at once been discontinued. It had been in use for years, however, and if its risks are what they are now held to be, it can only be considered as extremely fortunate that something serious has not occurred before.

### The Case for Steam

Despite the competition of streamline diesel trains all over the United States, the large and influential railways which still adhere to propulsion by steam are not without cogent reasons for their continued loyalty. For example, Mr. F. E. Russell, Mechanical Engineer of the Southern Pacific Railroad, in the discussion on a recent paper on "Steam versus Diesel-Electric Power," assuming for purposes of argument (though he personally considered the figures on the high side) the author's estimated annual mileage of 250,000 for a diesel locomotive as against 180,000 for a steam locomotive, calculated that at a cost of \$87.50 per h.p. invested in the diesel, the annual return would be 2,857 h.p.-miles per dollar on the diesel investment, whereas at \$35 per h.p. for steam the return would be 5,143 h.p.-miles per dollar. On the investment basis, therefore, steam should give 1.8 h.p.-miles to every diesel h.p.-mile, and, Mr. Russell added, "if I were a superintendent of motive power, I would prefer to have nearly twice the power to move business than to depend on half the number of locomotives." Mr. Russell also gave some striking figures as to the reduction in steam locomotive maintenance costs that had been effected on his system in the twenty years from 1920 to 1940. Notwithstanding heavier rolling stock, and especially the additions due to air-conditioning, as well as much faster schedules, the repair cost per passenger train-mile is actually less in 1940 than it was in 1920. In freight service the cost of repairs per mile per 1,000 lb. of tractive force had come down from 1.22 cents in 1920 to 0.68 cent in 1930, and further to 0.63 cent in 1940, or by all but 50 per cent. Another point that this speaker made in favour of steam was that on his line lubrication cost averaged 10 per cent. of fuel cost, as compared with 30 per cent. on diesel locomotives.

### Measuring Stresses

A new method of stress measurement in metals, which is notable by reason of its practical nature and relative simplicity, has been developed recently in the United States. It is known as the "Rosette" method, from the fact that four intersecting gauge lines, dividing the 360 deg. circle up into eight equal angles of 45 deg., are scribed on the surface of the metal that is under stress, in the form of a rosette, and it is the changes in the length of these lines, as a result of their stressed condition, that give the basis of the stress calculation. These changes are measured by extensometer, or other suitable means, and are combined by a method of calculation which can be carried out quickly with the aid of a slide-rule, and finally indicate both the change in stress in any direction through the centre of the rosette, and also the maximum or greatest change of stress and its direction. The great advantage of the method is that it is non-destructive, so that it can be used to measure stress changes under service conditions, and has a wide field of application. For example, stresses due to static loading on stationary or moving structures can be measured, as well as transient or vibratory stresses. The idea was first developed at a works making wrought-steel wheels, to measure the stresses set up in cooling the wheels after they have been dished, and again after heat-treatment; it has also been used to measure the stress caused in the wheels by such service conditions as braking. The method was fully described in the December, 1941, and January, 1942, issues of our American contemporary, the *Railway Mechanical Engineer*.

### Hereditary Likenesses in Locomotives

Tracing back to early times in locomotive history one can identify certain features of design which have been perpetuated in varying degrees right up to the present, or at least to within the last few years. It may be the style of chimney or cab, or some less conspicuous part of the locomotive such as the shape and construction of the balance weights in the wheels, or perhaps other features of smaller consequence. The resemblance between the old and the new is maintained in some measure although the modern engine has outgrown its predecessor by whatever standard of comparison it may be judged. Increasing proportions and weight must always exert some influence on design and tend to bring about the disappearance of many hitherto well-recognised characteristics of the earlier types, removing altogether most, if not all, of the slender and more graceful lines of the locomotives of the days that have gone. Time was when the designer of locomotives sought to beautify his creations by methods which nowadays would be considered altogether out of place; the twists and twirls of many early engines and the elaborate painting and lining out adopted can have no place in modern practice when the locomotive may be said to impress rather by its bulk and indication of abundant power than by refinement of outline and almost greyhound-like proportions. In spite of this, it is possible in many cases to detect some link with the past, a continuance of the likeness bequeathed by the early designs. The chimney cap, for instance, may have much the same outline in spite of the fact that it is two or three feet nearer the top of the smokebox than it used to be.

....

### Broader Gauge for German Railways after War?

In the present state of inflated passions, it appears to be a source of grievance in some German circles that Great Britain can sustain any claim to greatness, even in the sphere of history. The old Brunel 7-ft. gauge of the Great Western Railway is world-famous as the widest ordinary gauge yet adopted, but now it would seem that this is to be hopelessly outclassed by Germany—"after victory." According to the Berlin correspondent of the *Svenska Dagbladet*, German railway technicians are preparing a vast project for post-war railway traffic. Long-distance railways for rapid passenger and goods traffic will be given a gauge of 12 ft. or more, it is said. The correspondent adds that this war has resulted in a revival of railway activity, which, instead of being superseded by motor traffic, has practically replaced road transport in many countries by reason of fuel shortage. While one German writer advocates a 12-ft. gauge, another suggests an 18-ft. gauge whereby carriages would have a corridor in the centre with coupes on each side. The carriages, it is suggested, might be built with two decks and be 210 ft. long. It should be possible, the writer says, to travel on this gauge at 280 km.p.h. (say 175 m.p.h.) or more.

....

### Train Talk

On the relatively rare occasions when strangers conversed in railway trains before the war, the talk would turn to matters far removed from their immediate surroundings. In one of Jerome K. Jerome's books there is the story of a man who bored a whole compartment by relating the exploits of a cow owned by one of his relatives, and we ourselves have encountered themes scarcely less improbable, introduced by the ominous formula, "It's a funny thing, but..." Later, however, there has come a tendency to reminiscence, and reminiscence oddly enough of pleasant railway journeys of the past. Sometimes details of times, routes, and the railway companies concerned are such as to make it hard to repress a mild correction, but the evidently pleasant memory that inspires the narrator forbids the listener to be pedantic. No doubt the tendency to enlarge admiringly upon the past is a reaction against the uninviting picture of the future of war-time railway travel officially presented to discourage wanderlust and avoid disappointment among those who are compelled to move from place to place by rail. We cannot help feeling that such expressions of admiration for the railways lose something in being so belated.

### An Interesting 0-6-0

THE 0-6-0 locomotive may be regarded perhaps as one of the less interesting types and as offering fewer opportunities than those with more extended wheel arrangements for any major development. It is, however, a most useful class and although mainly employed for working freight trains of moderate loading it may also, when suitably proportioned, be legitimately ranked as a mixed-traffic engine, capable of handling satisfactorily certain kinds of passenger trains including excursions, and running at quite respectable average speeds. The use of inside cylinders in conjunction with the 0-6-0 wheel arrangement is practically standard in this country, and results in the production of a simple and compact form of construction which, on the whole, may be relied upon to give economical results both in operation and maintenance. Experience with the type has, however, shown that with the combination of features referred to a tendency may, and indeed often does, arise for the development of trouble with the driving boxes and also in some cases with the big ends as well. It is a question of proportions within the limits of space allowed and for the most part trouble of the kind mentioned arises only where the tractive force developed by the engine exceeds a figure of, say, 25,000 lb. or thereabouts. We know of cases where this has happened and has caused a good deal of interference with the availability of the engines concerned and their allocation for duty, but in other cases, coming within a more restricted level of tractive effort, such troubles have been greatly reduced and even may be considered as virtually non-existent.

Interest in this type of locomotive will most certainly be revived by the appearance on the Southern Railway of Mr. Bulleid's "Q1" class, of which an illustrated description appears on page 483 of this issue. Up to a point the engine may be considered orthodox in that it has inside cylinders of "normal" proportions, that is, 19 in. by 26 in., and employs ordinary link-motion for operating the piston valves. Those features apart, the design has some distinctive characteristics which impart to it a decidedly unusual appearance. Noteworthy among them is the style of the boiler clothing-plates which, with the smokebox, are almost flat at the sides and top; the chimney and dome are shaped to match and the result is to give the upper portion of the engine almost a square if not a top-heavy appearance. The absence of anything in the way of running boards or splashers and the use of "disc" wheels add to the unfamiliar effect. The cylinder and steamchest covers are left unprotected by plating such as is usually provided and the use of a "double cab" formed by fitting a shelter at the front of the tender, is worthy of note. There is something to be said in favour of these departures from the orthodox. The engine should certainly be a good one in service because it has a very excellent boiler, front-end and firebox, a high steam pressure, and well arranged controls, and it will, we have no doubt, commend itself to the running shed staffs as possessing a high degree of accessibility; the boiler casing can easily be detached either in sections or as a complete unit without having to remove the customary retaining bands; then the wheels, axleboxes, and motion can readily be got at because of the absence of platforms, splashers, and so forth; with its one-piece barrel and general proportions, the boiler, even though carrying a high pressure, should be good on maintenance, and the ample capacity of the superheater and firebox should enable it to work under favourable conditions for generating and supplying steam.

There is, however, to be taken into account the fact that the tractive force slightly exceeds 30,000 lb. and that the driving journals, as is usual in this type of engine, are only of medium proportions. We do not share the opinion of those who will almost certainly criticise unfavourably the leaving of the cylinder and steamchest covers open to the cooling effect of the atmosphere, for if this is a drawback really worth making a point of, we should be inclined to ask why? as with outside cylinders and valves no covering is deemed necessary. It is true that a measure of protection may be afforded in some cases by the slope of the running board, but at best this is only partial and the cylinders and steamchests as a whole remain exposed. A reading of the descrip-



tive article on page 483 will make it clear that every effort has been made in designing the locomotive to effect a saving in weight wherever possible, and the fact that the engine can work over all but 7 per cent. of the Southern Railway system bears testimony to the success achieved in this respect.

The building of these new goods engines is indicative of the conditions imposed on railway operation in time of war, which, in effect, reverse the importance of the passenger and goods traffic. The Southern Railway, nowadays largely considered as an electric line, has shown itself alive to the change produced by the war, by introducing these new steam-operated goods locomotives. Complaints are sometimes made that present-day locomotive engineers have never sufficiently lifted themselves out of the groove bequeathed to them by their predecessors, and that the only real development is in the larger proportions of modern engines. This of course is a marked exaggeration, but in any case nothing of the sort can be placed to Mr. Bulleid's account; he has shown both in his "Merchant Navy" locomotives and now the new "Q1" that in these matters he is nothing if not of an original turn of mind.

♦♦♦♦

### The Branch Line Problem in U.S.A.

INDICATIONS are not wanting that Americans are beginning to realise the seriousness of the continued closing down of railways in all parts of the country due to the impossibility of working the minor lines and branches at a profit in present conditions. The Interstate Commerce Commission recently authorised the Missouri Pacific RR. to abandon the 29½ miles of its line from Le Roy to Madison, Kansas; and an attempt has been made since by the Kansas Corporation Commission and certain local bodies to reopen the matter. The K.C.C. made determined efforts to have the line operated with a reduced service, and with gasoline cars operated by smaller train crews than normal, but the plan fell through owing to the opposition of the railway labour unions. The chairman of the K.C.C. has since issued an appeal to the chiefs of the operating unions to relax their rules, pointing out that in the end the railwaymen stand to lose considerably more employment by wholesale closing down of lines than they would by continuing to work the minor lines with reduced staffs. To date the State of Kansas has lost approximately 1,000 miles, or 10 per cent. of its total rail mileage, by the closing of branches, and further very considerable abandonments are probable unless some measures are taken to meet the situation. It is felt that the operation of these branches on a main-line basis must be stopped; motor units with three-men, and possibly two-men crews, operating three times a week, could handle the traffic, and so cut operating expenses by one-half. In this way many threatened branches might be saved from closing down.

The burden of labour costs in American railway operation may be better understood by reference to some of the provisions of the "full crew" laws which now are in force in the eighteen States of Arizona, Arkansas, California, Connecticut, Indiana, Maine, Massachusetts, Mississippi, Nebraska, Nevada, New York, North Dakota, Ohio, Oregon, South Carolina, Texas, Washington, and Wisconsin. Here, on lines of over 50 miles in length, a train of 25 freight wagons or less must carry five men, and if more than 50 wagons are being handled six men; a crew of five must be carried on every passenger train of 5 wagons and more, and six men if the passenger train handles baggage. In California, freight-train crews are compulsorily increased beyond these totals if the trains work over gradients of 1 in 100, and larger crews are called for with gradients of between 1 in 100 and 1 in 66, and still more men over steeper gradients than 1 in 66. Further threats in the same extremist direction are evident from the proceedings at the 54th session of the Californian legislature, when two bills, both sponsored by the railway unions and both defeated, sought to make it compulsory to carry at least one extra man in the cab of every diesel, diesel-electric, or other internal combustion locomotive hauling three or more cars, and also to prohibit double-heading of any train, with the proviso that if assist-

ance were necessary, the train must be broken up and at least 25 cars must separate each pair of locomotives in steam. In 1912 the State of Arizona enacted a law—one of many in force in different States—that no passenger train should be made up to more than 14 cars, and no freight train to more than 70 wagons; and recently the State sought to recover penalties from the Southern Pacific Railroad for having operated a 16-car passenger train and a 91-wagon freight train on certain specified dates, but without success. Recently, again, the Baltimore & Ohio RR. abandoned the operation into and out of New York of its long-established passenger train service, in view of the fact that the coming into effect of a new tax law in New Jersey would have increased the B. & O. tax bill from \$15,000 to \$300,000 a year. As noted in last week's issue at page 454 it is somewhat of a paradox that the State of Nebraska has recently petitioned the Interstate Commerce Commission for the reversal of a decision to permit the Chicago & North Western RR. to close the 102½-mile Hastings—Linwood branch, claiming that the branch could be operated more economically with lighter equipment; and this despite the fact that Nebraska enforces the full crew law.

The formidable total of American railway abandonments is better appreciated by a study of the statistics given in the January 3 issue of our contemporary the *Railway Age*. From 1932 to 1941 the minimum mileage abandoned was the 1,140 miles of 1937, and the maximum the 1,995 miles of 1934; the annual average for this ten years has been 1,632, and the spate of closures as yet shows no sign of abating. In earlier years the only year of particular note in this connection was 1921, when 1,626 route miles of line were closed down in the U.S.A., but apart from 1927, when the figure was the relatively small one of 287 miles, the closing has been going on so surely and steadily that in the quarter of a century from 1917 to 1941 inclusive the enormous total of 26,721 miles has been reached—an average of 1,069 miles for each of 25 consecutive years, and roughly 10 per cent. of the aggregate American railway mileage in 1917. The largest individual abandonment in 1941 was the 126-mile narrow gauge section of the Denver & Rio Grande Western from Antonito, Colorado, to Santa Fe in New Mexico; next came the Wichita North Western, which abandoned its entire system of 99 miles, and was one of fourteen small railways that went out of business in 1941. During the past ten years, of the 16,316 miles closed down, the Middle West and Southern States between them have accounted for 11,286 miles; of individual States, Texas heads the list with 925 miles, followed by Missouri with 914 miles, Michigan with 800 miles, and Iowa with 772 miles. It is little wonder that such a record as this is causing widespread concern.

YIELD ON BRITISH CAPITAL INVESTED IN ARGENTINA.—The yield of 1.4 per cent. on the £257,861,256 of capital invested in the railways in Argentina (to which reference was made in our issue of February 20) compares unfavourably with that of the various other projects in the Republic which have been financed from this country. On the total investment of £395,581,138 in Argentine enterprises which was dealt in on the Stock Exchange last year interest amounted to £9,099,715, equal to 2.3 per cent.; the amount on which no interest was forthcoming was £204,741,483. There was a drop of £21,726,666, or 5.2 per cent., in the total of Argentine securities dealt in on the London Stock Exchange in 1941, but although the variation was partly due to capital redemptions it was to a considerable extent caused by the omission of lines of stock as the result of no dealings having taken place over a long period, and of course there were no counterbalancing new securities, because for a good many years now new issues of capital have been almost entirely suspended. On the £58,380,111 of Argentine Government bonds dealt in the interest was £2,364,570, equal to 4 per cent., and none of the capital of this kind was unremunerated. In the miscellaneous group amounting to £79,339,771 interest totalled £3,140,070, or 3.9 per cent., which is more than it has been since 1931, and the amount of capital on which no interest was paid in this section was £27,069,664.



## THE SCRAP HEAP

Mr. Justice Henn Collins: At one time I said judicially that I did not know what the word "Blitzed" meant. The next morning I received a letter from Coventry saying if I had been there I would have known.

### L.N.E.R. SS. "SHERINGHAM"

The crew of the L.N.E.R. steamer ss. *Sheringham*, which is on Government service, has been "adopted" for the supply of comforts, books, games, etc., by the Passenger Manager's Headquarters staff of the L.N.E.R. Southern Area. Two substantial parcels have already been received by the Master of the ship, who has expressed the appreciation of the crew.

A man in a temper caused delay to City workers on the 6.45 a.m. train from Stanmore (Bakerloo Line) recently. At Kilburn he was getting out when the automatic doors began to close. He threw himself against them and kicked violently. This caused one door to jam, leaving the man just sufficient room to squeeze through. He disappeared. Then the door would not close. It was off its guide rail and there was delay while it was inspected. With the door partly open, the train went on to West Hampstead—the next station and, after several minutes the passengers were told to get out. They had to wait for the next train.

### RAILWAYMEN, 1 MINERS, 2

Railway workers and miners are running a close race for first place as contributors to the Red Cross Penny-a-Week Fund. At the end of February the 650,000 railwaymen were slightly ahead. They had contributed £113,000 against the miners' £100,000. Together the workers in these two industries have contributed more than one-tenth of all money raised by the Fund. Latest railway workers' totals are: L.M.S.R., £48,428; L.N.E.R., £37,371; G.W.R., £14,161; S.R., £12,992.

### 140,000 ARMY TRAFFIC MISHAPS IN 10 MONTHS

Claims against the War Department in 140,000 cases of Army traffic accidents in ten months are disclosed in the Army Appropriation Accounts for 1940. In the same period (from the time a Claims Commission was set up in October, 1940) 10,000 training and manœuvre claims and 9,700 miscellaneous claims were dealt with. Claims coming before the Commission were to the value of just over £1,000,000 a year.

### TESTS FOR NEW CIVIL SERVANTS

A number of Government departments have now adopted an "educational test" for all applicants for posts as temporary Civil Servants. The standard is hardly high, but it is thought it will eliminate those quite unsuitable for clerical work, some of whom have obtained Whitehall jobs recently. . . . A recent one used for Admiralty applicants required answers to simple arithmetical problems, a test of filing, a check test (candidates were given a list of names which was repeated with one or two errors which had to be spotted), and a general knowledge test. These were the general knowledge questions: What is the yellow ration book for? Name four things we are definitely asked to save? For what do these abbreviations stand—O.H.M.S., M.O.I., M.P., E.G., L.C.C., D.S.O.? What is the name of the First Lord of the Admiralty? Name any two foods which have disappeared since the outbreak of war?

There were one or two "teasers" (simple ones), such as: "If Christmas Day was a Thursday, what day of the week was January 4 the following year?" The Treasury hope that all departments will adopt the test system.—From "The Evening News."

### LEAPT ON TRAIN AT 83

Trying to board a moving train at Grove Park Station, Mr. John Beale, a retired rate collector, aged 83, was wedged between the platform and the train and killed.—From "The Evening News."

### SHE GOT HER MONEY—FROM ROOSEVELT

Twenty-three years ago Mrs. Helen Rausch, of New York, was trapped in the doors of an underground train. She has been trying since to get compensation from the Government, which was then running the railways. In desperation she wrote to President Roosevelt—and received £500 by return.—From "The Star."

The major proportions of the long distance trains in North America carry names which are their general means of identification by the general public; roughly 700 trains are so named, and some of these, like the Twentieth Century Limited, are world famous. Three passenger trains are named after women. The Nellie Bly, running between New York and Atlantic City on the Pennsylvania—Reading—Seashore line, is named after a newspaper reporter who in 1889 established what was then a world record by circling the world in 72½ days. On the Chicago & Alton one of the streamlined diesel-hauled trains competing

for the Chicago—St. Louis traffic is named Ann Rutledge, after a tavern-keeper's daughter, whose name is linked romantically with Abraham Lincoln (which incidentally is the name of the other streamliner maintaining the Alton's Chicago—St. Louis service). On the Norfolk & Western the Pocahontas, running between Norfolk and Cincinnati, carries the name of an Indian princess who is said to have saved the life of Captain John Smith.

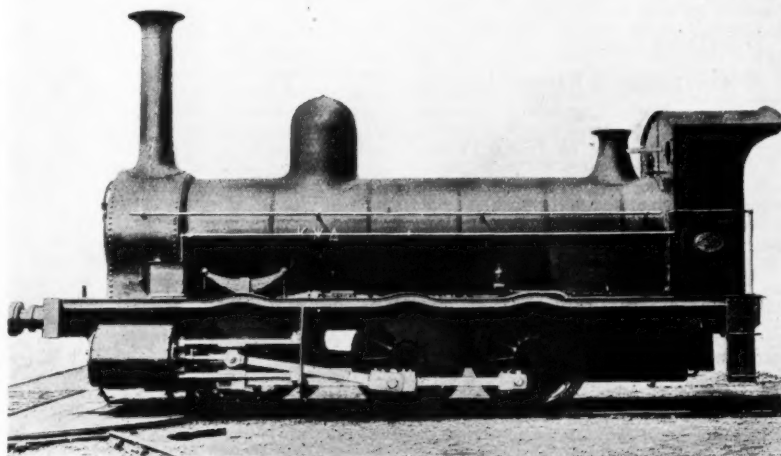
Keen observation and prompt action on the part of three L.M.S.R. employees resulted in the recapture of five German prisoners who recently escaped from camps in the North West of England. Porter W. Ashwood, after seeing a passenger train away from his station, noticed some movement on the track just past the end of platform. He found it was an escaped prisoner and handed him over to the L.M.S.R. Home Guard.

In the early hours of the morning of March 29, an L.M.S.R. signalman saw two men sitting in the bottom of a wagon on a passing freight train. He had the train stopped and the police advised. As the train slackened speed the two men made a dash across country, but were soon caught.

On the night of March 30, an L.M.S.R. Home Guard was on sentry duty at a railway crossing, and down the line saw two figures acting suspiciously. They were found to be escaped prisoners, and so two more ended their brief period of liberty. Five German prisoners are now back in camp again, probably thinking that "Travel L.M.S.R." is not so good a slogan.

### THE COST OF SNOW

Snow clearance during January and February cost London councils thousands of pounds for labour, salt for snow-melting purposes, and other expenses. Islington spent £2,270 which included 196 tons of salt costing £544, Hackney spent £1,500, and Finsbury £2,203.—From "The Evening News."



BRITISH-BUILT LOCOMOTIVE FOR RUSSIA IN 1871

The first Russian railway, namely, the Petersburg—Pavlovsk line, which had a gauge of 6 ft., was opened in 1836 with horse traction. Locomotives for its working were supplied in 1837 by the English locomotive firms of Stephenson and Hackworth. In 1871 the Vulcan Foundry Limited constructed engines, as illustrated, for the Konstantinopoli Railway; these, as seen in the accompanying illustration, were of the 0-6-0 type with tenders

## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

### UNITED STATES

#### Double Deck Coaches

Ten years ago the Long Island Railroad, which operates an intensive suburban service into and out of New York, put into use a double-deck coach, with upper bays of seats dovetailed mezzanine fashion into the lower, and both reached from a central aisle; seating capacity was thereby increased by over 50 per cent. A further ten of these coaches are now to be built, five of them electric motorcoaches, with driving compartment and 134 seats, and five trailers seating 130 passengers. The average complement of standard Long Island single deck cars is 80 passengers a car. The ample dimensions of the American loading gauge, which has from 2 ft. to 3 ft. more headroom than the British, simplifies the design of double deck vehicles, and it is, perhaps, surprising that more has not been done in this direction in the interests of weight reduction on the busiest suburban routes of the United States.

#### New Locomotive Sand Plants

A plant for the drying, storage, and supply of locomotives and, which is largely automatic in operation, has been devised by the Western Maryland Railroad, and installed at the locomotive depots at Hagerstown and Maryland Junction, Md. A track hopper receives wet sand from hopper wagons, taking it by a horizontal conveyor to the foot of an overhead steel sand-storage bin of 50 tons capacity. From the bin the sand flows by gravity through two steam dryers and a vibrating screen into the dry sand-storage bin, also of 50 tons capacity. From the latter the sand is discharged by a delivery pipe direct to locomotive sandboxes, or into box-wagons for transport as dry sand to other depots. The elevator to the wet-sand bin is electrically controlled by push-buttons, but automatically stops when the bin is full, and the remainder of the plant requires only intermittent attention. Appreciable economies have been effected in labour at the depots concerned by the fact that no hand shovelling of sand is now needed.

#### A New Bridge at Kansas City

To improve their approach to Kansas City by providing a direct east-west route, the Chicago, Milwaukee, St. Paul & Pacific and Chicago, Rock Island & Pacific Railroads are planning jointly to build a new bridge across the Missouri River at an estimated cost of \$1,500,000. Authorisation for the scheme is now being sought from the Interstate Commerce Commission.

#### Abandoned Branches

From February 17, 1942, all passenger service was discontinued on the Pennsylvanian, Salem, and Bridgeton branches of the Pennsylvania-Reading-Seashore Lines, with the result that 39 communities in the south of the densely-populated state of New Jersey are now without railway passenger facilities. Freight service is being continued. The Union Pacific R.R. has asked authority from the Interstate Commerce Commission to abandon the entire 111-mile system of its subsidiary, the Laramie, North Park & Western R.R., and the Illinois Central also seeks abandonment of its Dodgeville branch in Wisconsin, 57½ miles long. The need of all available equipment for war purposes and the high price obtain-

able for scrap are a double incentive to branch line abandonment at present, but at the same time a temporary increase in traffic, especially that resulting from motor-car restrictions and shortage of tyres, has granted a reprieve to various routes of which abandonment was contemplated.

### CHILE

#### State Railways' Rolling Stock Position

The General Manager of the Chilean State Railways has again drawn attention to the difficulties arising out of the chronic shortage of rolling stock and equipment, especially on the narrow-gauge northern section. This time his report is addressed to the Minister of Production, and he emphasises the impossibility of realising the national plans for increased production if the problem of transport is not first faced. Not only are renewals of the existing rolling stock required, but additional equipment must be ordered to meet increasing traffic demands. Various goods train services have already had to be cancelled, on both the north and south sections.

### BRAZIL

#### Paulista Railway

A new passenger service with electrified trains and broad gauge was inaugurated by this railway between Itirapina and Pederneiras, via Jaú, on November 15, 1941. The old timetable on the narrow gauge line between these two points has undergone alterations so as to allow of through connection by a new night train scheduled to leave São Paulo at 10.30 p.m., and arriving at Pederneiras at 6 a.m. where, taking the narrow gauge, arrival at Baurú is scheduled for 7 a.m., Marília, 11 a.m., and Tupã, 1.25 p.m. As a complement to the opening of the broad-gauge section between Itirapina and Pederneiras the narrow-gauge extension from Quintana (beyond Pompeia) to Tupã was also inaugurated.

The broadening of the gauge between Itirapina and Pederneiras necessitated the modification of almost the whole of the alignment from Itirapina to the bridge over the river Tiete which was finally discarded. A reduction of 36 km. was obtained in the overall distance of the new alignment which observed all possible technical improvements especially as to increased radius of curves. This entailed the building of an embankment 1,700 m. in length and 24 m. high at one point where almost a million cu. m. of earth were handled. Forty per cent. of the remaining permanent way was laid on diabase, and a new bridge in reinforced concrete, 30 m. long, and with nine arches, was built over the Tiete. A further embankment consisting of 300,000 cu. m. of earth was built near to Canelas.

On the old Serra de Brotas incline the maximum load for Mountain and Santa Fé type engines was 280 tons at extremely low speeds. These same engines are now capable of hauling 450 to 500 tons at 30 k.p.h. on the new line.

#### Victoria to Minas Railway

It is reported from Washington that negotiations are in progress between Brazil and the U.S.A. with a view to the latter financing the improvement of the Victoria to Minas Railway so as to facilitate the exportation of iron ore from the port of Victoria. Minas Geraes possesses large

supplies of high quality ore containing a high average of hematite, and the increased transport of it by the Victoria to Minas Railway would not only develop part of the unexploited resources of the State of Minas, but it will also alleviate the overtaxed carrying capacity of the Central Railway and congestion at the port of Rio de Janeiro, in addition to developing the port of Victoria and shortening the sea passage from Brazil to Baltimore, U.S.A., where the greater part of minerals from South America is unloaded. To this end the Espírito Santo State Government is also engaged on improvements to dock installations, and a new quay costing 15,000 contos of reis is in course of construction. This new quay is intended primarily for the shipment of minerals which will be transhipped at the rate of 2,000 tons an hour when arrangements are completed for trains to draw alongside vessels. The joint programme of improvements provides for the handling of 500,000 tons a year, though it is hoped that by the middle of 1942 further improvements will allow of the exportation of 2,000,000 tons a year.

### VENEZUELA

#### Palito-Palma Sola Link Line

The completion is announced of the branch line, 34 miles long on the 3 ft. 6 in. gauge, connecting Palito and Palma Sola, and thus forming a link between the Bolivar Railway and the Puerto Cabello and Valencia Railway. The Bolivar Railway, a British-owned concern, already controls and operates the Puerto Cabello line, and the latter connects at Valencia with the Gran Ferrocarril, running to Caracas. The new link line, which has been constructed by the Venezuelan Government, is expected to afford a considerable improvement in the conditions of working of the Bolivar Railway, although the difference in gauge (the Bolivar line is on the 2 ft. gauge) will prove an obstacle to through working.

### MEXICO

#### Road and Rail Development Projects

A considerable development in the extension of roads and railways is fore-shadowed, to be financed in part by the United States. Among the new roads mentioned are the Pan-American Highway, which would be completed from Mexico City to the Guatemalan frontier; the Nogales to Guadalajara road, a Chihuahua-Quetaro branch from El Paso, Texas, and a long highway down Lower California from Ensenada to La Paz. All these roads would have a strategic value, in the defence plans for the West Coast. Similarly, railway improvements that are under consideration are an extension of the Kansas City-Mexico-Orient line from Creel to San Pedro, 186 miles; a line from Mazatlan to Durango, 165 miles; a Mexico City line to Tampico, 193 miles; an extension of the Punta Penasco-Santa Ana line to Mexicali, on the frontier, and a line from San José del Carmen in the south to a point 120 miles east.

### PERSIA

#### Rolling Stock of State Railways

The Persian State Railways own the following rolling stock, according to the most recent available figures: 65 locomotives, 47 passenger cars, 1,057 goods wagons, and 74 tank cars. These figures apply, of course, to the civilian era immediately before the entry of British and Russian Forces.

# ROAD TRANSPORT SECTION

## S.M.T. Capital Reductions

WITHIN the past few weeks three subsidiaries of the Scottish Motor Traction Co. Ltd. have followed the lead given by the parent company earlier in the year, and are making a return of capital to their shareholders. It was recorded in THE RAILWAY GAZETTE of January 2, at page 39, that the Scottish Motor Traction Co. Ltd. intended that the capital of that company should be reduced by the return of 5s. a unit of ordinary stock to the holders. In order to provide funds for that purpose it was necessary that resolutions should be passed, in the first instance by certain subsidiary companies, and thereafter by the parent company, and in each case confirmation by the court was necessary. The directors of the Scottish Motor Traction Co. Ltd. in the annual report for the year ended October 31, 1941, and issued at the end of last year, stated that they were of opinion that the capital in the business of the company was in excess of its present requirements, and that, although some months would necessarily elapse before the proposals to return the capital became effective, they thought it right to give stockholders an early indication of their intention. They also added that the proposals would not involve any diminution in the earning power of the company or its subsidiaries. When the last accounts were made up the issued capital of the Scottish Motor Traction Co. Ltd. stood at £2,341,305, of which £1,341,305 was in fully-paid ordinary stock, and the balance in 6½ per cent. cumulative preference stock. The return of capital, therefore, involves £905,326, and has the effect of reducing the ordinary capital of the company to £1,005,979. The balance sheet at October 31 last showed cash in bank and in hand at £353,016, and the general financial position of the company was strong. Of the Scottish Motor Traction Co. Ltd. ordinary stock £670,652 is owned equally by the London Midland & Scottish and the London & North Eastern Railway Companies. The proposal of two subsidiaries of the Scottish Motor Traction Co. Ltd., namely, the Central S.M.T. Co. Ltd. and W. Alexander & Sons Ltd., to repay capital was recorded in the Road Transport Section of THE RAILWAY GAZETTE of March 20. The former is reducing its capital from £750,000 to £562,500, and the latter from £1,350,000 to £1,075,000, in each case by making a return to shareholders of 5s. in the £ of ordinary capital. The Western S.M.T. Co. Ltd. is reducing its capital from £750,000 to £375,000 by repaying 10s. on each £1 ordinary share. The Western S.M.T. Co. Ltd. occupies an unusual position in the Scottish Motor Traction Group by reason of its being incorporated in England. It was formed on September 24, 1913, as the Scottish General Transport Co. Ltd., which was then a unit of the British Electric Traction organisation. The present name was adopted in June, 1932, after the acquisition of control by the Scottish Motor Traction Co. Ltd. in November, 1931. After this acquisition it was made one of the area companies in the S.M.T. organisation, and at the time of the change of name it was considerably enlarged by the inclusion of many S.M.T. associates in its area.

## Front-Wheel Drive

THE current issue of *The Journal of the Institution of Automobile Engineers* contains a reprint of an interesting paper contributed to the proceedings of that body by Mr. George Roesch entitled "Post-War Automobile Design" in which the author discussed the subject of front-wheel drive for road motor vehicles. Enumerating the advantages of the system, more particularly in connection with private cars, he stated that front-wheel drive has the advantage of a readily detachable mechanical front assembly so that the whole vehicle lends itself to convenient and easy manufacture, and because it is built low with a surplus weight

at the front, it can have powerful front brakes on each side of the differential, thus cutting down unsprung weights to a minimum where that is of greatest advantage. The first and main objection to the system is the reduced tractive adherence of the front wheels as compared with rear-wheel drive, due to transference of load to the back wheels under forward acceleration, or when climbing a hill. The employment of four universal joints also increases mechanical difficulties and unreliability. A definite limit is thus set to the performance of front-wheel driven cars, and it prevents their development on a more general scale. The second objection is that the steering is on the heavy side; this is due to the increased weight in front and the provision of universal joints. The third objection is that the length of the car may be increased, thus again adding weight. In other respects the car gives a degree of roadworthiness which is found only on the best vehicles of orthodox construction, and with modern silent gears and universal joints the front transmission passes as much unnoticed as the orthodox rear one.

## Rear-Engined Motor Vehicles

IN the early stages of the industry designers of motor vehicles selected the rear position for the engine and de Dion Bouton designs utilised a small and compact power unit located under the rear seats in front of the axle; the radiator was carried at the front of the car. The reason why so many attempts to locate the engine at the back have since failed is that the engines used have been too bulky and heavy. Mr. George Roesch remarked that all the rear-engined cars which he had driven were tail-heavy in various degrees, giving an uncomfortable feeling of lack of stability and roadworthiness and uncertain steering control; nor have these cars shown any advantage in weight-saving and improved performance which could be attributed to the engine being carried at the rear. Noise, fumes, and heat have been eliminated in the normal construction, so that no such claim can be made wholly in favour of rear-engine location, yet this combination of the power unit, its transmission and rear suspension can give somewhat similar advantages to the front-wheel drive, of possible lower weight and cost with a flat body-floor, but with it the increased driving adherence provided by the rear wheels and light steering is retained. On the other hand, if the engine is to be large for a car of high performance, the position overhanging the back axle is not acceptable (all things being equal) on the ground of instability, due to the centre of gravity of the car being situated too far back. Quite apart from the added complications of longer control connections, the cooling question offers other difficulties. If the radiator is at the front, the fan drive and water connections will increase cost and weight, although heating of the body will be easier. If it is at the back, air circulation through it is more difficult to provide. Air scoops are necessary and more power may in consequence be absorbed by the fan to the detriment of the performance. In addition, provision must be made to warm the body.

The position is not the same with large commercial vehicles, especially motorbuses where the weight distribution arrangements are very different from those of private cars, and where body space is directly related to the economic success or failure of the design. As has been recorded in our columns from time to time, considerable success has been achieved in the U.S.A. with vehicles having engines in unorthodox positions, and, although the under-floor "pancake" engine is well recognised, and used extensively in America (and also is making its way in Great Britain), the rear-engined bus has also come to occupy an accepted position in the U.S.A. For example, an important tramway system in New York was replaced entirely a few years ago by front-entrance rear-engined single-deck buses.



## Producer-Gas Buses

### *A brief survey of the development of producer-gas operation by the Tilling group*

THE question of fuel supplies to large operators of motor vehicles is obviously of major importance. During the latter part of 1938, when war appeared to be imminent, consideration was given by Mr. John F. Heaton, the Chairman of Thomas Tilling Limited, to the subject of alternative fuels to imported liquid fuel, it being felt that in the event of the outbreak of hostilities imported supplies might be seriously restricted. After investigation by the technical staff of the Tilling organisation it was decided that the most practicable alternative was producer-gas made from coal or coke. The question of the most suitable type of plant was then considered and the Gohin-Poulenc, a cross-draught type, was ultimately adopted. In January, 1939, an order was placed for three of these plants for experimental purposes, and, after installation and preliminary tests, demonstrations were given in April of that year to the engineers in the Tilling organisation.

#### Manufacture at Bristol

In May, 1939, rights were acquired to manufacture under the Gohin-Poulenc patents and 30 plants were put in hand by the motor manufacturing works of the Bristol Tramways & Carriage Co. Ltd., a member of the Tilling group. In addition, sufficient material was acquired for 500 plants and stored against future requirements, and arrangements were made for bulk purchases and the storing of anthracite fuel. Progress up to that time having been reasonably satisfactory, a demonstration was given in June, 1939, to officials of the Ministry of Transport, who were supplied with full details of the plant.

The next few months of running disclosed the weakness of the filtering system originally supplied with the Gohin-Poulenc plant, and its bearing on cylinder bore wear. The cloth of the fabric filters was either burned by the hot gases or choked with moisture and dust, and trouble was also experienced from air leaks at the hopper and firebox doors. The difficulty with the doors was overcome by fitting a steel flange on the producer unit, the joint faces were machined flat and cast-iron doors (the faces of which were also machined flat) were fitted; the joint was then completed with an asbestos packing ring and the whole bolted up with bolts in place of studs. Other unsatisfactory features were the temperature differences and uneven expansion and contraction at the upper portion of the junction of the firebox trunk

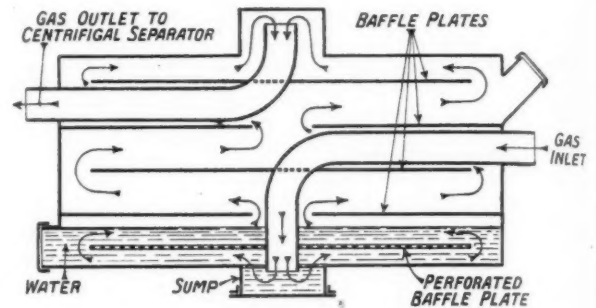


Fig. 1—Original Morison water separator

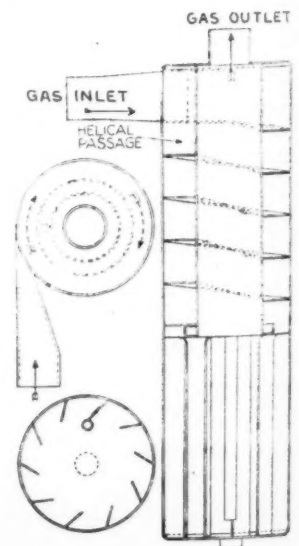
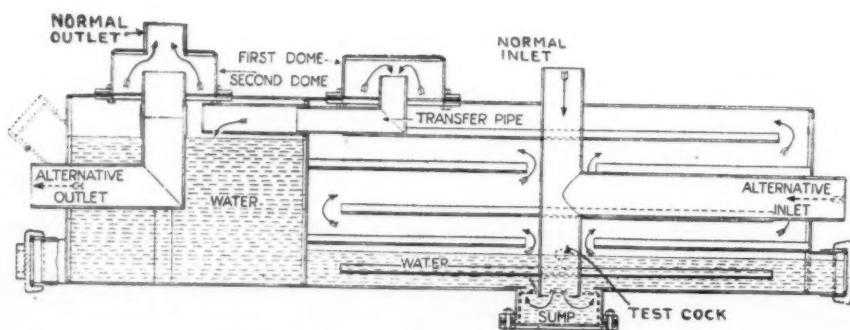
and the hopper body; these were alleviated, but not cured, by welding strengthening plates at the points indicated.

#### The Morison Water Filter

The filter trouble was found to be more difficult to deal with, and various types and materials such as sisal, oiled coke, and combinations of these were tried, but continuous satisfactory results were not obtained. The main drawback to the sisal filter, or in fact to any filter of this type, is the care and skill required to pack the filtering material in the container; further, the efficiency of the filter is not constant, as it becomes clogged in use and impedes the suction through the producer, resulting in combustion troubles. A frequent check on engine cylinder bore wear was maintained during these experiments, but, despite the utmost care and attention, the wear was at all times excessive and in the worst periods as high as 150 miles for 0.001 in. wear.

It was accordingly decided, in the light of the experience gained, to redesign the plant completely, using the Government Emergency Producer as a basis. The first measure was to discard the dry filter and in its place a water washer and filter was developed from designs prepared by Mr. W. J. Morison, Chief Engineer of the Eastern National Omnibus Co. Ltd., another unit of the Tilling group. At the same time, in May, 1940, a programme of research on the purely scientific side of the problem of reducing cylinder

Fig. 2—Below: The two-stage Morison water washer. Right: The centrifugal moisture separator. Both are shown in section



wear and corrosion was undertaken on behalf of the Tilling group by the Mining Department of the Birmingham University. Two reports have been submitted so far on this very obscure subject, and confirmation has been received as to the efficiency of the water washing system of filtration.

The development of the water washer and filter was made in stages and in its present form the gas is made to pass through water, then over a series of baffles and into another compartment where it is projected on to the surface of the water; it then passes through a centrifugal moisture separator and so on to the air mixing valve.

After various preliminary experiments, a single-stage water filter, as shown in Fig. 1, was introduced, in which the gas was led into a sump, passed upwards through water and round baffle plates, and finally led away to the engine from a collector in a dome. After experience covering about 12,000 miles of road service it was recognised that this system of filtration washed the gases to an extent at which the great majority of the dust particles and chemical impurities in the gas were removed, but some water was still carried over into the engine. To give even better cylinder wear results (0.001 in. per 3,750/4,000 miles was attained), and to eliminate water carry-over, a second stage was added to the water washer, as indicated in Fig. 2, and a centrifugal water separator was installed between the washer and the engine.

This patented arrangement of Morison's now comprises a water washer housed in a rectangular steel tank, which for a 100 b.h.p. engine measures about 44 in. long by 14 in. wide by 11 in. high. The gas inlet can be either vertical or horizontal as best suits the particular installation, and the same applies to the gas outlet, and both alternatives are shown in Fig. 2. Gas from the coolers passes through the inlet pipe to the sump, which is fitted with a perforated screen plate, and immediately above this there is a perforated baffle plate submerged in the water. Above the normal water level are four non-perforated baffle plates round which the gas must find its way to the first dome after it has bubbled up through the water. A collecting and transfer pipe leads the gas from the dome into a second water compartment, where the gas is passed over the surface of the water before it is collected in a second dome and drawn off to the centrifugal water separator. Both the water compartments have filling and draining holes of about 2½ in. dia. and fitted with bronze caps. The first water compartment also has a test cock for checking the water level, but in the second compartment this is checked automatically by the filler cap location.

The centrifugal water separator is mounted vertically and is about 8 in. dia. by 30 in. long for a 100 b.h.p. engine installation. The gas from the second dome of the water washer enters at the top from a tangential pipe, and is whirled at high velocity round a helical passage on its way to the bottom of the separator. The lower chamber is fitted with a number of vertical internally-projecting fins to entrap the whirling gas and water, and after being freed from the water the gas is led away upwards through the vertical cylinder comprising the centre part of the separator. In some installations two of these separators have been fitted, the second located close to the air/gas mixer on the engine.

The daily attention this type of washer and separator requires is a draining of the whole system and re-filling with 4 to 10 gal. of water, depending upon the size of the plant. At rarer intervals the end draining caps and sump cover are taken off and the interior cleaned out. The water filter, incidentally, acts as a non-return valve so that the gas is locked in the system, and re-starting on gas after a halt or lie-over is easier than normal, and the supplementary petrol consumption—where this starting method is used—is diminished.

In addition to the development of the water washer and filter, the cooling system for the gases was redesigned in order to give the hot gases greater contact with the cooling surfaces in the cooling tubes. The coolers are fitted with internal baffle plates which force the gas from side to side into contact with the exposed walls. Experience has also shown that a vertical location of the cooler tubes is preferable to a horizontal one.

As introduced and now used, these revised cooling and

filtration measures are giving more consistent running, and gradually the excessive cylinder wear has been reduced. Over a considerable period of testing the wear now averages 4,000 miles for 0.001 in. wear, a figure which is comparable with that for petrol engines.

As producer gas is a dry gas and has no specific lubricating properties, the engine lubricating system is extended to provide a supply of oil through a sight drip-feed into the gas passage in front of the air mixing valve.

### Summary of Modifications

The following is a summary of the modifications made to the Government Emergency Producer, the design of which was based on a cross-draught producer without water injection:—

1. The front of the hopper on which the cleaning door and tuyere are fitted is made of heat resisting steel.
2. Doors made airtight with flange machined faced joints and asbestos packing.
3. Tuyere located over the cleaning door and inclined at an angle. This arrangement facilitates cleaning and keeps the tuyere free from dripping clinker and also retains the fire zone in good shape.
4. Gas take off arranged by an external sump with a perforated screen plate on the internal or hopper side. The external sump traps any ash or fuel which may be carried over by the gas.
5. Substitution of the Morison water filtration system for the dry-type filters originally fitted.
6. Redesign of the cooling system and the provision of doors on the cooling tubes to facilitate cleaning. The cooling tubes are located vertically and fitted with internal baffle plates to make cooling of the gases more efficient. Connecting tubes of coolers are of straight through type so that they can be cleaned with a rod.
7. Provision of a "blackout" chamber to tuyere inlet pipe.

The standard fuel at present in use is a good quality anthracite known as Progasite, which is supplied in open trucks, the need for drying and bagging the fuel being unnecessary since the water filter has been standardised. There is a saving of 27s. 6d. a ton by taking the fuel in this manner. The fuel is further treated with a solution of sodium carbonate (soda ash), the effect of which is to render the ash more fusible and to reduce the tendency to clinker. In this connection arrangements are being made for the fuel to be delivered already treated by the supplier. Several other fuels have been tested and although certain of them have good points the main difficulty is to obtain continuity of supply in sufficient quantities to meet requirements. Of the various fuels tested, those known as Suncole and Oco give performances comparable with soda-treated anthracite. These manufactured fuels, however, are handicapped by their bulk compared with an equal weight of anthracite and would need much larger hoppers for equal mileages. These remarks apply to all fuels of the manufactured or coke types.

Petrol is used only for starting, and in the latest vehicles operating on stage carriage work the petrol carburettor is not controlled from the driver's cab, and only a limited supply of petrol sufficient for all starting during a day's operation is allowed.

A regular servicing routine has been established for the consistent and reliable operation of the vehicles. Briefly it comprises the cleaning out of clinker and ash from the fire-box, refuelling the hoppers, cleaning out the coolers, washer, and separator, and the refilling of the water washing filter. Apart from the fact that the skilled attention necessary to repack the dry filter is not required, there is a complete absence of the dust associated with this process. Engines receive the usual attention, with the addition of a daily removal and cleaning of sparking plugs.

### Notable Operating Results

At present there are in the Tilling group of companies 43 vehicles operating on producer-gas in various parts of the country; the plants fitted to these vehicles are in the main

GAS  
INLETcured,  
d.to deal  
ealed  
continuous  
awback  
is the  
in the  
instant,  
through  
requent  
during  
atten-  
worstexperi-  
g the  
e first  
water  
red by  
ational  
p. At  
rch on  
ylinder

OUTLET

of the Government type, modified and improved as previously described, and built at the motor manufacturing works of the Bristol Tramways & Carriage Co. Ltd. Two small depots in the group are operated entirely by vehicles running on producer-gas; these are the Maldon depot of the Eastern National Omnibus Co. Ltd., where 9 vehicles are in service, and the Cromer depot of the Eastern Counties Omnibus Co. Ltd., where 12 vehicles are operated. The complete operation on producer-gas of all vehicles at the Maldon depot began on May 1, 1941, and from that date up to and including February 28, 1942, the total mileage worked by producer-gas vehicles was 262,759. The approximate quantity of imported fuel thus saved was 35,800 gal. The services operated from the two depots cover town and country routes with average running speeds of  $14\frac{1}{2}$  to  $18\frac{1}{2}$  m.p.h. and route mileages up to 41 miles, with a present average of 48,000 miles a month. The Cromer depot was turned over to producer-gas operation on January 14, 1942.

Detailed costs of the operation from the Maldon depot

show a fuel cost of 1.37d. p.c.m.\*; this includes petrol for starting and labour for treatment of the anthracite. There is also the additional cost of filling the hoppers and the extra labour in starting up compared with a petrol-engined vehicle. These costs amount to 0.3d. p.c.m., giving a total cost of 1.67d. p.c.m. compared with a petrol cost of equivalent vehicles of 2.75d. and a diesel oil cost of similar vehicles of 1.52d. A very important point, however, is the saving of imported liquid fuel, and, taking only the two depots referred to, on a mileage of 48,000 a month, the saving is at the rate of 78,500 gal. a year.

We are officially informed that the Tilling organisation has designed and is constructing a producer-gas chassis with a special body, and that the vehicle is expected to be ready for delivery very shortly. The group also placed an order early in March with the Bristol Tramways & Carriage Co. Ltd., for a further 100 producer-gas trailer plants for use by the Tilling group of companies.

\* p.c.m. = per car mile, often termed per vehicle mile

## British Railways and Road Passenger Transport

An interesting feature of the annual accounts of the four main-line railway companies in recent years has been that section of account No. 8 (Revenue Receipts & Expenditure of the Whole Undertaking) which shows the return of the capital invested in the numerous passenger and freight road transport concerns with which the railways have become associated since 1928. In the table below the railway shareholdings in the principal road passenger transport undertakings operating in the provinces are shown. The profitable nature of these investments is indicated by the high return secured last year. The G.W.R. has investments totalling £2,300,133, which yielded a return of £233,047 or 10.13 per cent., which was not up to the 1940 return of £242,821 or 10.55 per cent., only because of a decline in

earnings from West National; the L.N.E.R. secured a return of £470,196 on its investment of £2,437,192, namely 19.29 per cent., against 17.92 per cent. in 1940; and the L.M.S.R. investment of £3,067,488 returned £449,233 or 14.64 per cent., in comparison with 14.10 per cent. in 1940. The Southern Railway Company has nearly £2,000,000 invested in passenger road transport undertakings; as these are not charged to capital expenditure the details are not given in the accounts, but by the courtesy of the Chief Accountant, Mr. R. G. Davidson, we are again enabled to include particulars of the nominal holdings and earnings. On page 480a we give a folding plate showing the organisation of the bus companies in the British Electric Traction Co. Ltd., and Thomas Tilling Limited, groups at January 1, 1942.

RAILWAY SHAREHOLDINGS IN PASSENGER ROAD TRANSPORT AT DECEMBER 31, 1941, SHOWING EARNINGS FOR THE FAST YEAR

Associated Company	Issued Share Capital	L.N.E.R.		L.M.S.R.		G.W.R.		S.R.	
		Holding	Earnings	Holding	Earnings	Holding	Earnings	Holding	Earnings
Aldershot & District Traction Co. Ltd. ....	250,000 Ord. ....	£	£	£	£	£	£	£	£
W. Alexander & Sons Ltd. ....	1,100,000 Ord. ....	150,000	35,000	150,000	35,000	—	—	82,721	8,272
Birmingham & Midland Motor Omnibus Co. Ltd. ....	250,000 6% Par. Pref. ....	125,000	—	125,000	—	—	—	—	—
City of Oxford Motor Services Limited ....	1,440,000 Ord. ....	—	—	432,000	64,800	288,000	43,200	—	—
Crosby Motor Services Limited ....	100,000 8% Cum. Pref. ....	—	—	—	—	113,000	14,641	—	—
Cumberland Motor Services Limited ....	226,000 Ord. ....	—	—	—	—	—	—	—	—
Devon General Omnibus & Touring Co. Ltd. ....	74,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
Eastern Counties Omnibus Co. Ltd. ....	1,100,000 Ord. ....	—	—	412,071	32,966	137,357	10,969	—	—
Eastern National Omnibus Co. Ltd. ....	150,000 Ord. ....	—	—	49,999	7,000	—	—	—	—
East Kent Road Car Co. Ltd. ....	200,000 Ord. ....	—	—	—	—	40,917	6,137	27,279	4,092
East Midland Motor Services Limited ....	150,000 7% Cum. Pref. ....	—	—	—	—	—	—	—	—
East Yorkshire Motor Services Limited ....	756,000 Ord. ....	184,039	22,091	25,282	3,034	—	—	—	—
Hants & Dorset Motor Services Limited ....	200,000 5% Cum. Red. Pref. ....	225,000	22,500	225,000	22,500	—	—	151,355	12,108
Hebble Motor Services Limited ....	900,000 Ord. ....	—	—	—	—	—	—	—	—
Highland Transport Co. Ltd.* ....	450,000 Ord. ....	—	—	—	—	—	—	—	—
Lincolnshire Road Car Co. Ltd. ....	200,000 6½% Cum. Pref. ....	83,333	11,666	41,667	5,833	—	—	—	—
Maidstone & District Motor Services Limited ....	300,000 Ord. ....	149,362	22,404	—	—	—	—	213,556	38,440
Northern General Transport Co. Ltd. ....	550,000 Ord. ....	—	—	—	—	—	—	—	—
North Western Road Car Co. Ltd. ....	150,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
Ribble Motor Services Limited ....	120,000 Ord. ....	15,000	2,250	45,000	6,750	—	—	—	—
Scottish Motor Traction Co. Ltd. ....	35,000 Ord. ....	—	—	17,500	1,093	—	—	—	—
Southdown Motor Services Limited ....	200,000 Ord. ....	63,929	6,393	15,985	1,599	—	—	263,492	29,643
Southern National Omnibus Co. Ltd. ....	750,000 Ord. ....	—	—	—	—	—	—	—	—
Southern Vectis Omnibus Co. Ltd. ....	200,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
Thames Valley Traction Co. Ltd. ....	831,081 Ord. ....	365,767	36,577	—	—	—	—	—	—
Trent Motor Traction Co. Ltd. ....	300,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
United Automobile Services Limited ....	750,000 Ord. ....	124,444	22,400	248,888	44,800	—	—	—	—
Western National Omnibus Co. Ltd. ....	1,200,000 Ord. ....	—	—	530,445	53,044	—	—	—	—
Western Welsh Omnibus Co. Ltd. ....	200,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
West Yorkshire Road Car Co. Ltd. ....	1,341,305 Ord. ....	335,326	67,065	335,326	74,011	—	—	—	—
Wilt & Dorset Motor Services Limited ....	1,000,000 6½% Cum. Pref. ....	—	—	106,863	—	—	—	—	—
Yorkshire Traction Co. Ltd. ....	750,000 Ord. ....	—	—	—	—	—	—	242,792	24,279
Yorkshire Woollen District Transport Co. Ltd. ....	542,200 Ord. ....	—	—	—	—	—	—	271,100	21,688
	115,000 Ord. ....	—	—	—	—	—	—	57,500	6,900
	15,200 6% Cum. Pref. ....	—	—	—	—	—	—	15,000	900
	250,000 Ord. ....	75,147	7,515	150,293	15,029	85,191	13,630	36,510	5,842
	547,288 Ord. ....	798,412	146,488	—	—	—	—	—	—
	1,627,233 Ord. ....	39,622	—	—	—	—	—	—	—
	2,000,000 7% Cum. Pref. ....	—	—	—	—	—	—	—	—
	400,000 6% Cum. Pref. ....	—	—	—	—	1,000,000	114,000	—	—
	507,500 Ord. ....	—	—	—	—	400,000	—	—	—
	787,500 Ord. ....	195,843	36,614	195,843	36,614	253,750	30,450	—	—
	200,000 6½% Cum. Pref. ....	—	—	—	—	—	—	—	—
	120,000 Ord. ....	107,289	17,306	107,289	17,306	—	—	30,724	6,145
	437,500 Ord. ....	4,661	—	4,662	—	—	—	—	—
	24,350 7% Non-Cum. Pref. ....	—	—	—	—	—	—	—	—
	528,000 Ord. ....	88,000	13,927	176,000	27,854	—	—	—	—

\* Highland Transport Co. Ltd. shares are 17s. The L.M.S.R. holds 17,500 ordinary shares



## NEW 0-6-0 FREIGHT LOCOMOTIVES, SOUTHERN RAILWAY

*These engines are being introduced to cope with heavy wartime freight traffic. Their restricted weight enables them to work over practically the whole of the company's system*

BY the courtesy of Mr. O. V. Bulleid, M.I.Mech.E., Chief Mechanical Engineer of the Southern Railway, we are able to reproduce photographs and an outlined dimensioned drawing of the new "Q1" class, 0-6-0 type, superheater locomotives designed by him and now under construction at the works of the Southern Railway. The engines are being built to cope with the heavy wartime freight traffic and were designed to meet the special requirements of the Southern Railway system.

The weight had to be restricted so that the engines could work over practically the whole system. By the reductions referred to later and by careful attention to the design of all frame members, and other parts, the weight of the engine as built and in working order is 51 tons 6 cwt. The weight of the tender has been kept down to 38 tons 1 cwt., thus giving a total weight of 89 tons 6 cwt., and in consequence the engine can work over 93 per cent. of the company's lines, the 7 per cent. from which it is excluded representing unimportant lines with little traffic.

As the existing "Q" class 0-6-0 locomotives had shown that additional boiler capacity was desirable, it was decided to provide the largest possible boiler within the weights allowed and within the restricted load gauge. The boiler, of which we reproduce separate illustrations, has a one-piece barrel whilst the firebox is based on that of the "Lord Nelson" boiler, the same press blocks being used for the throat and back plates; this is the largest firebox in cross section that can be accommodated consistent with providing suitable look-outs for the enginemen with the restricted cab width imposed by the composite loading gauge. The grate area, 27 sq. ft., is, we believe, larger than that of any other 0-6-0 type engine on British railways.

The diameter of the barrel at the throat plate is 5 ft. 9 in. and at the smokebox 5 ft. 0 in. There are 21 superheater flue tubes 5½ in. outside dia., and 209 small tubes 1½ in. outside dia. Although the barrel is short, it will be noticed that the total evaporative heating surface is ample, being 1,472 sq. ft., which, with the superheating surface of 218 sq. ft., gives a total of 1,690 sq. ft. The firebox heating surface is the liberal one of 170 sq. ft. Monel metal stays are fitted in the firebox. The weight of the boiler, carrying a pressure of 230 lb. per sq. in., and with five tons of water, is 21 tons 5 cwt. so that special steps had to be taken, even to the extent of discarding all details not essential to efficient working of the engine if the total weight was to be less than the prescribed maximum.

The boiler is lagged with Idaglas lagging, a home-produced material. As it was thought preferable that this material should not carry any load, instead of the ordinary lagging and clothing bands, the casing plates are carried off the frame independently of the boiler, and the casing being merely a covering it was possible to fabricate it from very thin plate. The shape of the casing was governed by the contours of the cab, firebox, and smokebox also by the maximum boiler diameter, and the manufacturing conditions; all the ribs of each section are alike instead of varying with the shape of the boiler over which it is fitted so that only two patterns have to be manufactured.

The casings project sufficiently far over the wheels to make it unnecessary to fit the usual running boards and this made it possible to save 17 cwt. of steel. A further saving of 6 cwt. in weight was obtained by fabricating the cab from 22-gauge steel sheet suitably reinforced by rolled U sections. The absence of the usual running boards has made the inside motion and, in fact, the whole of the engine unusually accessible. The smokebox also is fabricated and its contour is such that all flanges, tubes, etc., are completely accessible.

The engine has two inside cylinders with outside admission piston valves above them, the leading dimensions being

shown in the accompanying table. Special attention was paid to the cylinder passages so that the engines can be used for passenger train working, if required. As is usual with this type of engine the middle pair of wheels are the driving pair; the connecting rod big ends are a modified marine type which has given very good results. The white metal lining is only ¼ in. thick. The piston valves are operated through rocking shafts by two sets of Stephenson link motion valve gear, the valve travel being 6½ in. and the lap 1½ in. The piston rods are fitted with U.K. cast-iron packing. The reversing gear is steam operated. The solid bronze axle-boxes are lined with white metal, the oil being fed through the crown.

Owing to the outside admission of steam to the cylinders, the exhaust steam has a very free and direct passage through the blast pipe. This latter is fitted with the multiple jet exhaust (five nozzles being used) with the wide chimney which has been found so successful on the Southern Railway. The blower is fitted below the blast pipe cap and is used when the regulator is closed to prevent any vacuum forming in the exhaust cavity. The blower has five jets set to blow centrally through the exhaust nozzles of the cap. The cast-steel driving wheels are of the B.F.B. patent type, similar to those used on the "Merchant Navy" class. Laminated springs are provided for the leading and trailing wheels and helical springs for the drivers.

The 3,700 gal. tender has a tank of welded construction fitted with a self-trimming bunker capable of holding five tons of coal. Ample cupboard room has been provided for the enginemen on the tender. An extension from the top of the front plate of the tender lineable with the engine cab roof practically encloses the footplate and gives ample protection to the driver and fireman; this extension and the cab roof are connected by a flexible strip. The sides of the cab and those of the tender at the forward end have been provided with sliding shutters which can be used effectively during the blackout period. The remaining gap between the engine and tender sides when the slides are drawn is covered with a loose sheet, thus dispensing with anti-glare screens.

The fire irons are carried in a trough on the left-hand side of the tender and this, at the same time, gives the driver an unusually good look-out when running tender first, a condition frequently necessary with this type of engine.

The water filling holes are arranged in the tender cab to make it unnecessary for the fireman to climb to the top of the tender.

The appearance of the engine although unusual, is the result of designing to meet requirements. As already intimated accessibility is the keynote of the design and this, of course, is an asset of considerable value during repair work in the shops and also in the running sheds. As emphasising this, attention may be drawn to:—

(1) The shape of the smokebox which renders the steam pipes clear for extracting tubes and elements.

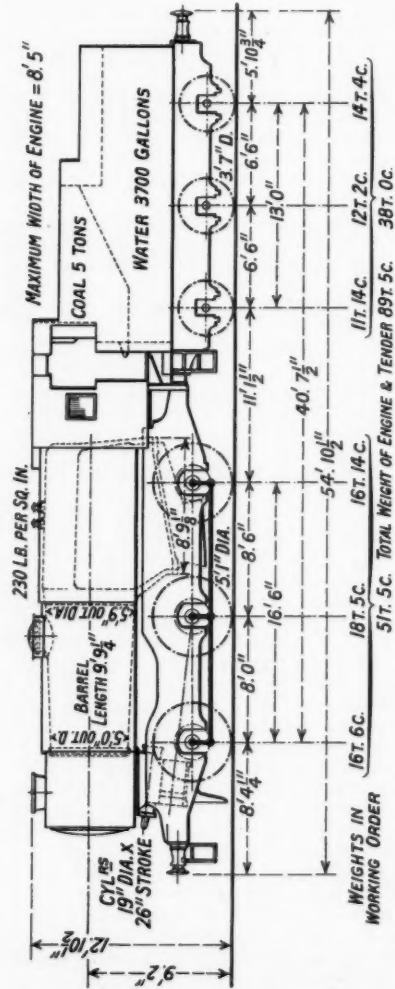
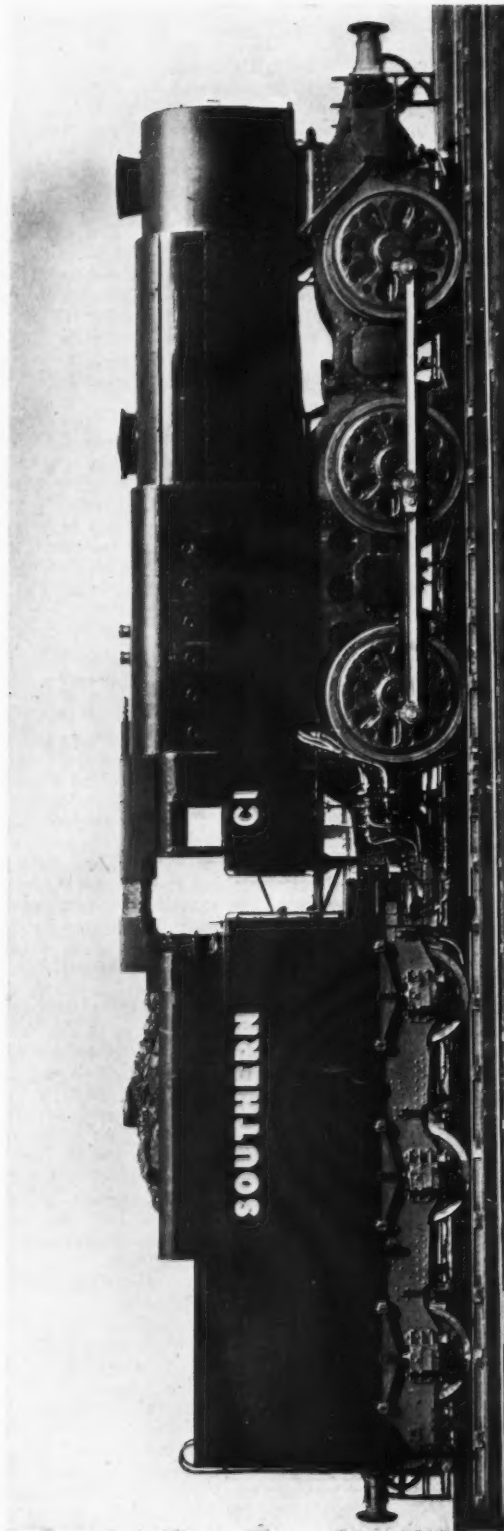
(2) Accessibility of the valve motion due to the absence of the usual footplating and wheel splashers.

(3) The injectors are unusually accessible owing to both of them being located on the fireman's side.

Displacement lubricators are used in connection with the steamchests and cylinders, and gravity lubrication for axle-boxes the delivery pipes having "open" syphons at the point of delivery to the boxes.

The engine provides an example of the rational use of the tonnage of material available per engine by employing it where it will be most productive as regards haulage capacity.

Facilities were afforded us by Mr. Bulleid for inspecting the first of the engines at various stages in its construction and the illustrations on pages 484 to 486 are reproduced from originals taken by THE RAILWAY GAZETTE photographer.



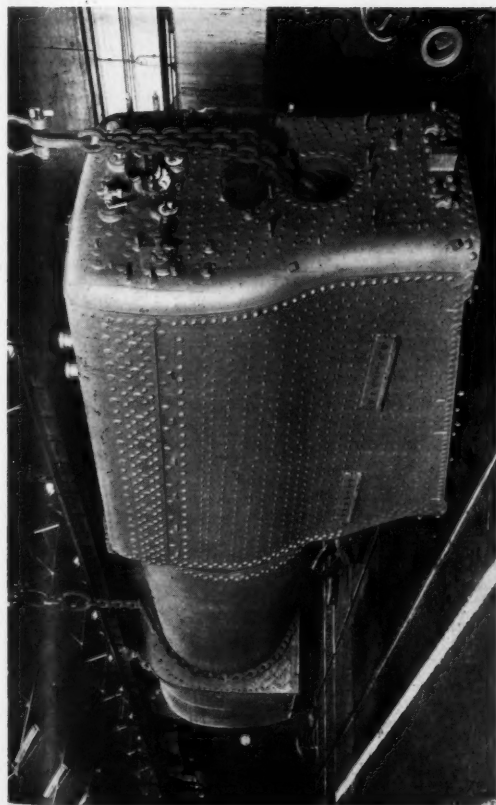
The following are the main particulars of the new engines shown in comparison with those of the "Q" and "N" classes of the Southern Railway

	Q class 0-5-0	Q 1 class 0-6-0	N class 2-6-3
Cylinders, dia and stroke	19" x 26"	19" x 26"	13" x 28"
Wheels (coupled) dia	5' 1"	5' 1"	5' 4"
Wheelbase (engine)	16' 6"	16' 6"	24' 4"
Length over buffers and tender	38' 11"	40' 7"	47' 9"
Boiler pressure	53 lb.	54 lb.	57 lb.
heating surface firebox	200 sq. ft.	230 sq. ft.	200 sq. ft.
tubes and flues	122 sq. ft.	170 sq. ft.	135 sq. ft.
Superheater surface	1285 sq. ft.	1412 sq. ft.	1526 sq. ft.
Gross area	21.9 tons cwt.	27.0 tons cwt.	25.0 tons cwt.
Maximum axle load	18' 0"	18' 5"	18' 0"
Weight of engine in working order	49' 10"	51' 5"	61' 4"
tender in working order	49' 10"	38' 1"	52' 4"
Adhesion weight	26,100 lb.	33,000 lb.	23,000 lb.
Tractive effort (85 per cent. h.p.)	5,500 lbs.	5,700 lbs.	4,000 lbs.
Tender, water capacity	3,500 galls.	3,700 galls.	4,000 galls.
coal capacity	5 tons	5 tons	5 tons

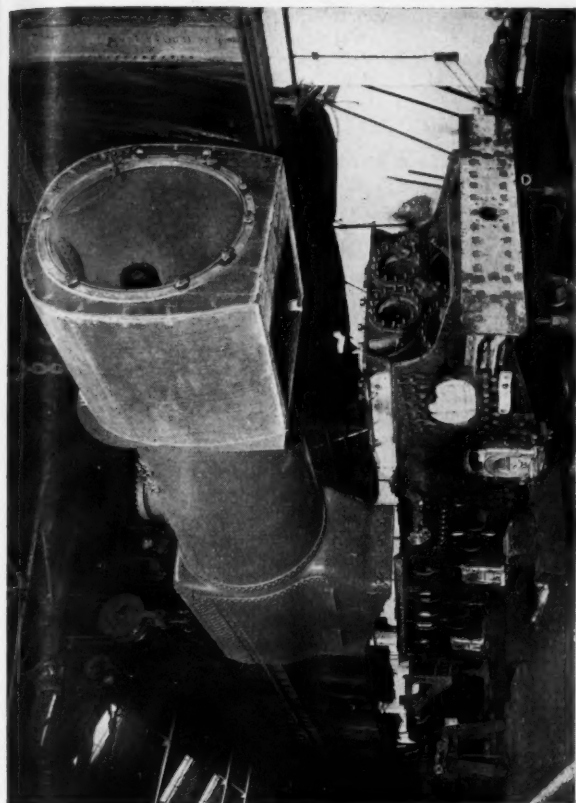
New "Q 1" class 0-6-0 locomotive, Southern Railway. Mr. O. V. Bulleid, M.I.Mech.E., Chief Mechanical Engineer

Built at the company's locomotive works, 1942

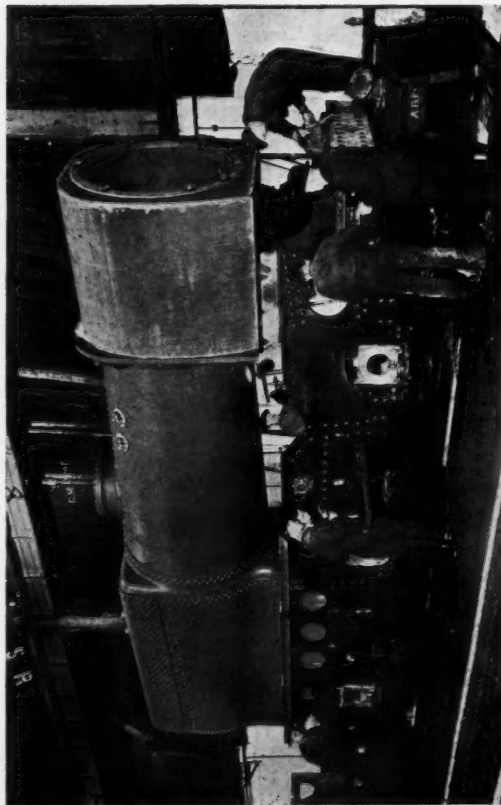
The table at side gives comparative particulars of Southern Railway "Q", "Q 1", and "N" class engines



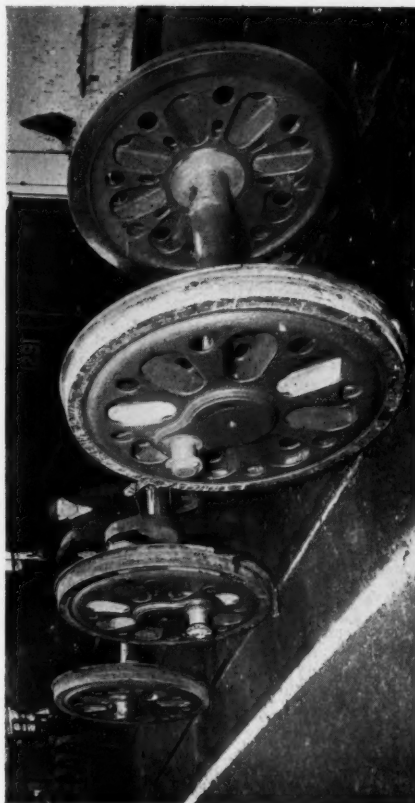
View of boiler showing large proportions of firebox



Boiler suspended from crane above frames



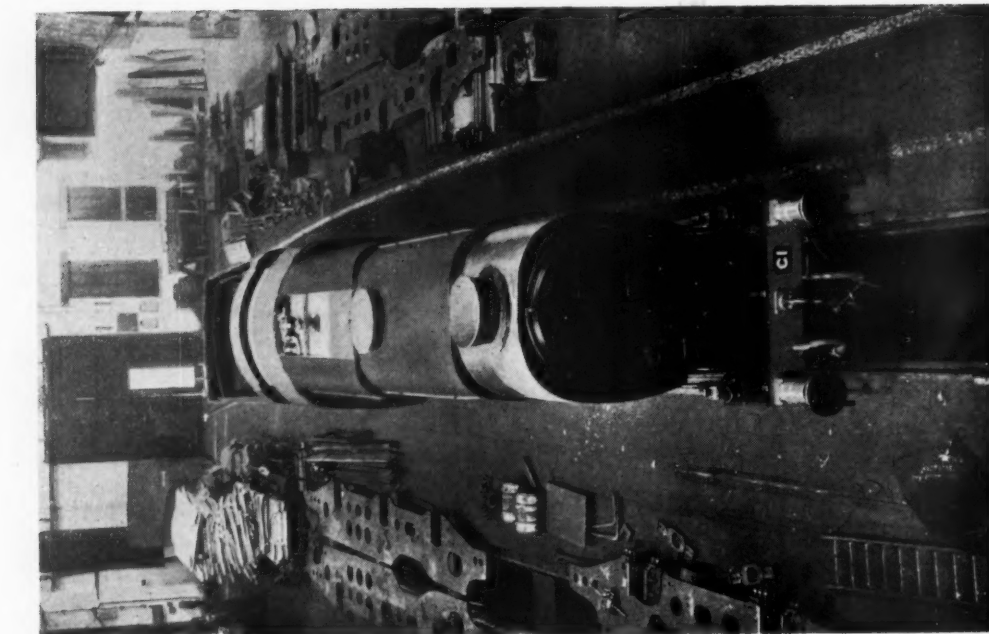
Boiler lowered into position on frames



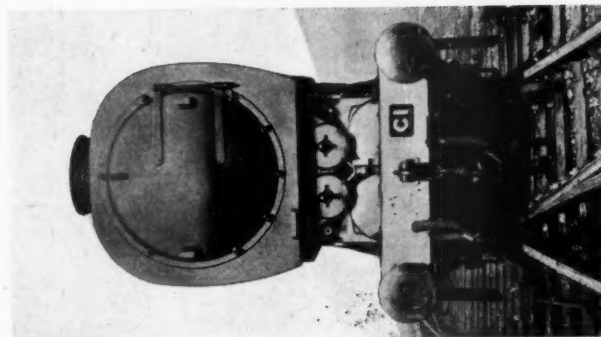
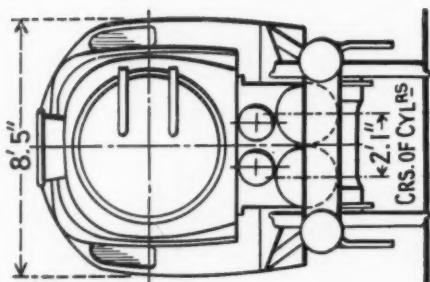
Wheels ready to go under the engine

STAGES IN THE CONSTRUCTION OF THE NEW "Q1" CLASS 0-6-0 LOCOMOTIVE, SOUTHERN RAILWAY

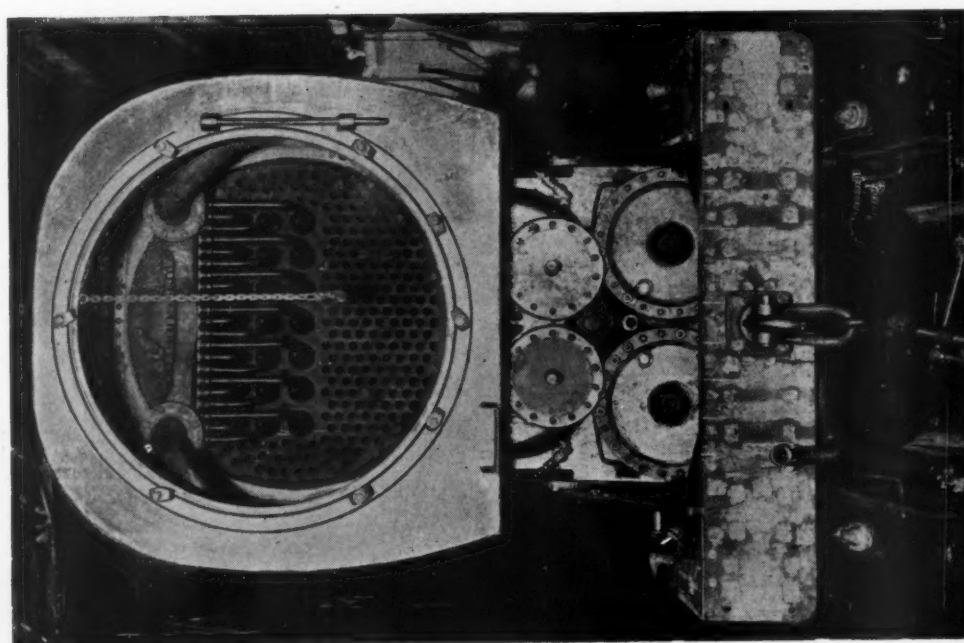




*Locomotive from above. Additional engine frames on each side*



*Front end views of engine*



*Interior of smokebox during construction*

NEW "Q1" CLASS 0-6-0 FREIGHT LOCOMOTIVE, SOUTHERN RAILWAY

R  
M  
West  
been  
Asses  
Heal  
ciatic  
cessi  
who  
auth

Sir  
has  
Gene  
Supp

S  
M.  
lieves  
of  
U.S.  
Depu  
port  
nates  
trans  
appoi  
Comm

L.M.  
Sir  
Bart.  
memb  
& So  
Scotti  
of Bils  
Bank  
Colvil  
Chair  
ment

Col  
Camp  
appoi  
Midla  
pany  
at pre  
the N  
under  
sation

The  
been n  
1942 :  
Mr.  
Engine  
Mecha  
Mr.  
ford,  
Eastle  
Mr.  
Works  
Manag  
Mr.  
Engine  
neer (C  
C. A.  
April  
Mr.  
Division  
East I  
Mr.  
tant, I  
Office.  
Assista  
zineer.

# RAILWAY NEWS SECTION

## PERSONAL

### RAILWAY ASSESSMENT AUTHORITY

Mr. Isaac Dixon, F.S.I., Valuer to the West Derby Assessment Committee, has been appointed a member of the Railway Assessment Authority by the Minister of Health on the nomination of the Association of Municipal Corporations in succession to the late Mr. Trevelyan Lee, who had been a member since the authority was first constituted.

Sir George Beharrell, D.S.O., has been appointed Director-General of Controls, Ministry of Supply.

### SOVIET TRANSPORT CHIEFS

M. Kaganovich has been relieved of his duties as Commissar of Means of Communications U.S.S.R., and has been appointed Deputy Chairman of the Transport Committee, which co-ordinates railway, sea, and river transport. M. Khrulev has been appointed Commissar of Means of Communications.

### L.M.S.R. SCOTTISH COMMITTEE

Sir Alexander Steven Bilsland, Bart., M.C., has been appointed a member of the London Midland & Scottish Railway Company's Scottish Committee. He is Chairman of Bilsland Bros. Ltd., and the Union Bank of Scotland; Director of Colvilles Limited; and Vice-Chairman of the Scottish Development Council.

Colonel The Hon. Ian Malcolm Campbell, D.S.O., has also been appointed a member of the London Midland & Scottish Railway Company's Scottish Committee. He is at present District Commissioner of the Northern District of Scotland under the Civil Defence organisation.

### SOUTHERN RAILWAY APPOINTMENTS

The following appointments have been made, with effect from May 1, 1942:—

Mr. E. A. W. Turbett Mechanical Engineer, Eastleigh, to be Assistant Chief Mechanical Engineer.

Mr. F. Munns, Works Manager, Ashford, to be Works Superintendent, Eastleigh.

Mr. M. S. Hatchell, Carriage & Wagon Works Manager, Eastleigh, to be Works Manager, Ashford.

Mr. A. Dean, London East Divisional Engineer, Purley, to be Assistant Engineer (Maintenance), Deepdene, *vice* Mr. C. A. G. Linton, who will retire on April 30.

Mr. C. W. King, Assistant London East Divisional Engineer, Purley, to be London East Divisional Engineer.

Mr. A. H. Cantrell, Engineering Assistant, London East Divisional Engineer's Office, Purley (on active service), to be Assistant London East Divisional Engineer.

Sir Walter R. Nugent, Bart., as recorded in our March 6 issue, has retired from the Chairmanship of the Great Southern Railways Company which office he filled since the year 1925, when he succeeded the late Sir William Goulding. Before the amalgamation of the Irish railways Sir Walter Nugent was a Director of the Midland Great Western Railway Company, of which he became Deputy Chairman in 1913. He has been Chairman of the Irish Railway Clearing House since 1926, and was a member of the English Railway Clearing House, and Railway Superannuation Com-

mittee. Sir Walter R. Nugent, Bart., as recorded in our March 6 issue, has retired from the Chairmanship of the Great Southern Railways Company which office he filled since the year 1925, when he succeeded the late Sir William Goulding. Before the amalgamation of the Irish railways Sir Walter Nugent was a Director of the Midland Great Western Railway Company, of which he became Deputy Chairman in 1913. He has been Chairman of the Irish Railway Clearing House since 1926, and was a member of the English Railway Clearing House, and Railway Superannuation Com-

mittee. Sir Walter R. Nugent, Bart., as recorded in our March 6 issue, has retired from the Chairmanship of the Great Southern Railways Company which office he filled since the year 1925, when he succeeded the late Sir William Goulding. Before the amalgamation of the Irish railways Sir Walter Nugent was a Director of the Midland Great Western Railway Company, of which he became Deputy Chairman in 1913. He has been Chairman of the Irish Railway Clearing House since 1926, and was a member of the English Railway Clearing House, and Railway Superannuation Com-

### INDIAN RAILWAY STAFF CHANGES

In connection with the amalgamation of the Eastern Bengal and Assam-Bengal Railways, to form the Bengal & Assam Railway under State management as from January 1, 1942, the following appointments have been officially notified:—

Mr. H. N. Parker, appointed to officiate as Chief Commercial Manager.

Mr. C. N. Silvester, appointed to officiate as Deputy Chief Mechanical Engineer.

Rai Bahadur A. K. Gupta, appointed to officiate as Deputy Chief Operating Superintendent.

Mr. R. G. Manson, appointed to officiate as Deputy General Manager, Chittagong.

Mr. F. A. de La Nougerede, appointed to officiate as Deputy Controller of Stores.

The following Indian railway staff changes have also been announced:—

Mr. O. R. Tucker has been appointed to officiate as Divisional Superintendent, E.I.R., as from October 18, 1941.

Mr. H. N. Sahgal has been appointed to officiate as Deputy Chief Engineer, E.B.R., as from November 21.

Rai Bahadur N. K. Mitra has been confirmed as Deputy Chief Engineer, E.I.R.

Mr. W. T. Biscoe, V.D., has been confirmed as Deputy Chief Commercial Manager, N.W.R.

The services of Mr. A. R. A. Hare Duke have been placed at the disposal of the Supply Department.

### L.M.S.R. APPOINTMENTS

The following appointments have been approved by the directors of the L.M.S.R.:—

Mr. A. J. Allenby, Resident Storekeeper, Locomotive Stores, Crewe, to be Divisional Storekeeper, Scotland, Glasgow (St. Rollox), *vice* Mr. G. M. Copland, retiring.

Mr. A. Burgin, Goods Agent, Rotherham, to be Goods Agent, Rochdale, *vice* Mr. T. E. Jackson, promoted.

Mr. A. S. Clarke, Chief Clerk, Sheffield (Wicker), to be Goods Agent, Rotherham.

Mr. John Schofield, Architect, Canadian National Railways, has been appointed Chief Architect.

We regret to record the death on April 3 of Captain John Edward Mills, Chairman of John Mills & Co. (Llanidloes), Ltd.

Appreciative reference to the work of Mr. Francis Fraser was made by the Chairman of the British Thomson-Houston Co. Ltd. at the recent ordinary general meeting. Mr. Fraser was Secretary of the company



*Elliott*

**Sir Walter R. Nugent**

Chairman, Great Southern Railways (Eire), 1925-42

*[& Fry]*

mittee. Sir Walter was Deputy Chairman of the Fishguard & Rosslare Railways & Harbours Company. In 1929 Sir Walter was President of the Dublin Chamber of Commerce. He is a director of the Bank of Ireland, and was Deputy Governor in 1924, and is also a director of the Northern Assurance Co. Ltd. He was High Sheriff for Westmeath in 1922 and 1923, and Deputy Lieutenant and J.P. for the same county. Sir Walter was a Senator of the Irish Free State in 1928 and is a Peace Commissioner, as well as a steward of the Turf Club and the National Hunt.

Mr. H. Leslie Boyce, M.P., is a candidate for the vacancy created by the resignation of Sir Percy Vincent from the City of London Court of Aldermen. Mr. Boyce is Chairman of the Gloucester Railway

for over forty years and a member of the board for the past twenty-seven years. He retired from the board at the end of 1941.

Mr. H. H. Swift, New Works Assistant to Superintendent of the Line, G.W.R., who has been appointed Divisional Superintendent, Chester, from May 1, entered Great Western Railway service at Paddington in 1904. After two years in the

Passenger Train Working Department, and in the latter year became a passenger train runner. In 1935 he acted temporarily as an Assistant to the Divisional Superintendent at Paddington, and in August, 1936, was appointed Chief Clerk to the Divisional Superintendent at Worcester. In June, 1938, he was transferred to the Bristol Division as Chief Clerk to the Divisional Superintendent and in April, 1940, was appointed Assistant Divisional Superintendent at Pad-

dington, he went to France, and eventually became Director of Railway Traffic.

Mr. A. V. R. Brown, A.M.Inst.T., Divisional Superintendent, Chester, Great Western Railway, who, as recorded in our April 10 issue, has been appointed Divisional Superintendent, Birmingham, from May 1, entered the company's service in the Telegraph Department at Gloucester in 1901, and subsequently occupied positions in that department at Basingstoke,



**Mr. H. H. Swift**

Appointed Divisional Superintendent,  
Chester, G.W.R.



**Mr. C. W. Powell**

Appointed Assistant to the Superintendent  
of the Line, G.W.R.



**Mr. A. V. R. Brown**

Appointed Divisional Superintendent,  
Birmingham, G.W.R.

Audit Office, he was transferred to the General Manager's Office, where he was engaged for nine years, during the latter part of which he acted as Personal Clerk to the General Manager. For the next seven years Mr. Swift was attached to the Superintendent of the Line's office as a train runner, and subsequently transferred to the Chief Goods Manager's office and was appointed Continental Commercial Agent. This position he held for six years, and was then appointed Goods Agent at Manchester. Four years later he returned to the Traffic Department as Chief Clerk to the Divisional Superintendent, Chester. In October, 1937, Mr. Swift was appointed Assistant Divisional Superintendent, Cardiff, and in February, 1941, became New Works Assistant to the Superintendent of the Line.

Mr. C. W. Powell, Assistant Divisional Superintendent, Paddington, has been appointed Assistant to the Superintendent of the Line. He entered the service in 1915 in the Office of the Superintendent of the Line. In January, 1918, he joined H.M. Forces and served in the Inns of Court O.T.C. and R.A.F. until March, 1919, when he returned to the Passenger Train Section of the Office of the Superintendent of the Line. In July of the same year he was transferred to the Divisional Superintendent's Office, Swansea, to gain station and divisional experience, and remained there until 1923 when he returned to the Rates & Fares Section of the Office of the Superintendent of the Line. From 1925 to 1934 he was attached to the

dington, which post he relinquishes to take up his new duties.

In our issue last week we inadvertently recorded the death of Mr. Owen Richard Williams. This reference should have been to Mr. Llewelyn Wynn-Williams. We regret any inconvenience or embarrassment which may have been caused to Mr. Owen Richard Williams.

Sir Lynden Macassey, K.C., has been appointed by the Lord Chief Justice as the Chairman of the Reuters Trust. Sir Lynden is one of the Shareholders' Auditors of the Great Western Railway Company, and a member of the Advisory Committee on Railway Subjects of the London School of Economics & Political Science (University of London). In the past he enjoyed a large practice at the Parliamentary Bar.

We record with regret the death at Bourne End, on April 8, at the age of 75, of Brig.-General Sir Valentine Murray, K.B.E., who had much to do with railways in India and Burma. While holding the position of Traffic Manager, Burma Railways, he was required to go to South Africa in 1899 as Assistant Director of Railways; he returned to India in 1902 at the conclusion of the South African campaign. He held successively the positions of Deputy Traffic Superintendent of the North Western State Railway and Traffic Superintendent of the Oudh & Rohilkhand and the Eastern Bengal State Railways. In 1914

Frome, Chippenham, and Bristol. In 1905 he was transferred to the Divisional Superintendent's Office at Bristol, and four years later was appointed to the Divisional Relief Staff, and returned to the Divisional Superintendent's Office in 1915 to take charge of the New Works & Accident Section. In 1924 Mr. Brown was appointed Yardmaster & Passenger Agent at Avonmouth Docks, which position he held until his promotion to Weston-super-Mare as Stationmaster in 1926. In 1934 he was appointed Assistant Divisional Superintendent at Bristol and in 1938 became Divisional Superintendent at Chester. Mr. Brown was the lecturer for the signalling classes at Bristol for some years, and is an Ambulance Gold Medallist. He was a well-known athlete in his younger days.

At the ordinary general meeting of the Midland Railway Co. of Western Australia Ltd., on April 13, Mr. William Sandford Poole, Chairman of the company, expressed the regret of the board at the death of Mr. William Tait in November last. Mr. Tait had served the company for some 28 years, and had been Secretary for the last 22 years. Mr. John S. Lewis, formerly Assistant Secretary, has been appointed Secretary.

Mr. G. B. Hutchings, Director of Salvage & Recovery of the Ministry of Supply, has joined the board of the Waste Paper Recovery Association, which was formed to stimulate the salvage of waste paper, and cardboard. The Directors are representative of newspapers, periodicals, board mills, and paper mills.



## TRANSPORT SERVICES AND THE WAR—135

**Blackout regulations amended—Coastal area restrictions—Passenger luggage limitation—Potato transport restrictions—Drastic curtailment of road transport in Eire**

For the greater part of the year, the blackout time extends from half an hour after sunset to half an hour before sunrise, but during the summer months, from the next day after the first Saturday in May to the second Saturday in August, it is reduced to the period from one hour after sunset to one hour before sunrise in Scotland and the counties of Northumberland, Durham, and Cumberland, and from three-quarters of an hour after sunset to three-quarters of an hour before sunrise in the rest of England and Wales. Last year, the period of reduced blackout coincided with that of double summer time. This year, however, double summer time began a month earlier and the possibility of introducing the shorter blackout period simultaneously with double summer time was examined. As, however, the main factor is the length of twilight, it has been decided that the date previously fixed is the earliest at which the reduced blackout period can be introduced without taking an undue risk. The position this year will be, accordingly, that while double summer time was introduced on April 5, the reduction of the black-out period will not take effect until Sunday, May 3.

During the period of double summer time, the curfew hour for aliens outside London will be 11.30 p.m. instead of 10.30 p.m. An Order to this effect has been made by the Home Secretary. The curfew hour for aliens in the City of London or the Metropolitan Police District remains at twelve midnight.

**Exemption of Allies from Aliens Restrictions**

On February 12 the Home Secretary announced in the House of Commons that nationals of countries which are fighting with us against the Axis are to be given a wide measure of exemption from the wartime restrictions on aliens. The necessary Orders have now been made. They are entitled the Aliens (Movement Restriction) Order, 1942; the Aliens (Protected Areas) Order, 1942; and the Control of Maps Order, 1942; and they came into operation on March 16. The persons who benefit are British Protected Persons and persons who are registered with the police as nationals of one of the following States: Belgium, China, Costa Rica, Cuba, Czechoslovakia, the Dominican Republic, Ethiopia, Greece, Guatemala, Haiti, Honduras, Yugoslavia, Luxembourg, the Netherlands, Nicaragua, Norway, Panama, Poland, Salvador, the U.S.S.R., and the U.S.A. The persons concerned are no longer subject to the curfew, and are not required to obtain a licence from the police for the possession and control of motorcars and bicycles; they are

free to enter Aliens Protected Areas without having to obtain police permission, so long as they report to the police when a night or more is spent in a Protected Area, and they are able (like British subjects) to have maps up to a scale of one inch to the mile and guide books. They remain subject to the peacetime requirement on all foreigners to register with the police, and to report changes of their permanent addresses to the police. The Home Secretary reserves the right to reimpose the restrictions on individuals, but it is expected that these exceptional cases will be very few. The new Orders do not affect the obligation imposed on householders by Article 4 of the Aliens (Movement Restriction) Order, 1940, to report to the police the arrival and departure of aliens of any nationality staying at their premises.

**Coast Restrictions Re-imposed**

The restrictions on visits to the coast between the Wash and the Thames and between Hastings and Littlehampton, which were temporarily suspended for the winter months, were reimposed on April 15. On the same date a restriction on taking up permanent residence in these areas came into operation. Any person who has taken up residence in any of these areas since November 14 last, unless he resided in the area for an aggregate period of six months between January 1, 1939, and November 14, 1941, must leave the area unless he has ascertained from the Police that he satisfies the conditions laid down for permanent residence. The areas affected by these restrictions are:—

- (a) A coastal strip, approximately five miles deep, stretching from King's Lynn to the Thames;
- (b) the whole of Kent, except:
  - (i) those parts of the county which are within the Metropolitan Police District;
  - (ii) the Urban District of Orpington; and
  - (iii) the Rural Districts of Sevenoaks and Tonbridge;
- (c) the coastal areas of Sussex from the Kentish border to Littlehampton and extending northwards to include the Rural Districts of Battle, Hailsham, Chancery, and Chailly;
- (d) the Isle of Wight.

**Further Cuts in Restaurant Car Facilities**

The Minister of War Transport has decided that it has now become necessary to make further substantial reductions in the number of restaurant cars on trains. During the Easter period all restaurant cars were withdrawn from steam trains and in many cases these cars are not being re-instated. Under existing condi-

**NOTICE OF ADDITIONAL PORT CHARGES**

ON THROUGH AND PORT TO PORT RATES FOR THE CONVEYANCE OF MERCHANDISE AND LIVESTOCK BETWEEN GREAT BRITAIN AND EIRE

The Railway Companies and Steamship Companies trading between Great Britain and Eire give NOTICE that in consequence of the increase by the Dublin Port and Docks Board and the Cork Harbour Commissioners of charges made by them on merchandise and livestock traffic passing through the ports of Dublin and Cork respectively, port charges as under additional to the through and port to port rates for the conveyance of such traffic by Goods and Passenger train services, will be raised on and from 1st April, 1942:—

	Goods	Cattle
ADDITIONAL PORT CHARGES		
Merchandise Train Traffic (Goods Limited)	1s. 6d. per ton	2s. 6d. per head
Passenger Train Traffic (Goods Limited)	1s. 6d. per ton	1s. 6d. per head
Livestock Traffic		
Cattle	1s. 6d. per head	2s. 6d. per head
Sheep, Lambs, Goats or Pigs	1s. 6d. per head	1s. 6d. per head

Above: R.E.C. announcement of increases resulting from additional port charges at Dublin and Cork. Middle: Poster in conjunction with reduced restaurant car facilities. Right: R.E.C. poster announcing the limitation to 100 lb. of passenger luggage

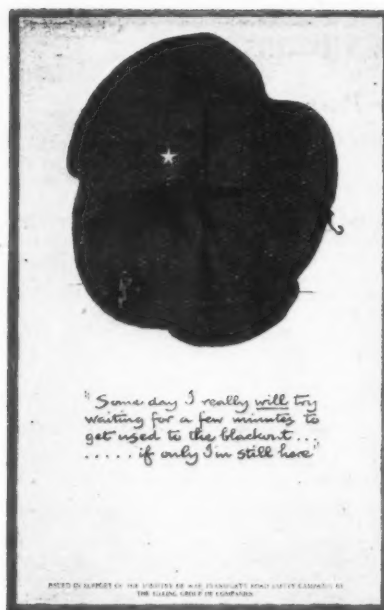
**LIMITATION IN WEIGHT OF PASSENGERS' LUGGAGE**

In exercise of the powers conferred upon him by Regulation 56 of the Defence (General) Regulations, 1939, and of all other powers enabling him in that behalf, the Minister of War Transport hereby orders as follows:—

1. Notwithstanding any obligation imposed upon the Railway Companies by or by virtue of the Railways Act, 1921, or any other Act or instrument determining their functions, a Railway Company shall not allow any passenger by rail to take with him personal luggage in excess of 100 lbs.
2. This Order shall not apply to passengers who are:—
  - (a) Members of H.M. or Allied Forces.
  - (b) Merchant Seamen, or
  - (c) Persons proceeding abroad.
3. This Order may be cited as "The Railways (Restriction of Passengers' Luggage) Order, 1942."

Signed by order of the Minister of War Transport, this sixteenth day of March, 1942.  
(Sgt.) H. W. W. FISHER,  
An Assistant Secretary.

RAILWAY EXECUTIVE COMMITTEE



Three further examples of Fougasse advertisements issued by the Tilling Group of Companies in support of the Ministry of War Transport Road Safety Campaign.

tions it is not possible to provide extra food and refreshments at railway stations, and passengers making long journeys are advised to take their food with them.

#### Limitation of Railway Passenger Luggage

The amount of personal luggage that railway passengers may take with them on a journey is now limited to 100 lb. for each passenger, irrespective of whether payment is made for excess luggage. This limitation of weight is laid down in an Order made by the Minister of War Transport on March 19. The Order does not apply to the luggage of members of H.M. Forces, Allied Forces, and Merchant Seamen, or of passengers going abroad.

#### Potato Transport Restrictions

To enable the best use to be made of available supplies, the transport of potatoes into or between the following areas is now prohibited except under permit:—

- Area 1.—London, Hertfordshire, Essex, Kent, Surrey, Sussex, Buckinghamshire, Berkshire, Middlesex, Oxfordshire.
- Area 2.—Dorset, Gloucestershire, Hampshire (including Isle of Wight), Somerset, Wiltshire.
- Area 3.—Cardigan, Carmarthen, Glamorgan, Hereford, Monmouth, Pembroke, Radnor, Brecon.
- Area 4.—Cheshire, Lancashire, Denbigh, Flint, Caernarvon, Anglesey, Cumberland, Westmorland.
- Area 5.—Worcester, Warwick, Stafford, Shropshire.
- Area 6.—Cornwall, Devon.
- Area 7.—Yorkshire, Durham, Northumberland.

Transport within the areas is unrestricted, except that it is subject to the existing restrictions on forwarding by rail to certain stations in the Birmingham, Manchester, and Newcastle districts.

#### Transport Subsidy for Home-Grown Mining Timber

In order to avoid unnecessary transport and to maintain supplies of pitwood to the South Wales coalfield, a transport subsidy will not generally be payable on home-grown mining timber despatched to English coalfields from stations in Somerset, Devon, and Cornwall, after April 15, 1942. On application being made to the Pitwood Department, Clifton Down Hotel, Bristol, 8, before consignment, a subsidy may be granted on the rail carriage of sawn mining timber and small props (i.e.,  $\frac{3}{4}$  in. top diameter, inclusive) despatched to English coalfields from stations in those counties.

A transport subsidy is not payable in respect of deliveries to collieries in South Wales, but under Article 6 (2) (c) of the Control of Timber (No. 21) Order, 1941, the maximum price of mining timber sold to a colliery in Monmouth, Glamorgan, Pembroke, Carmarthen, or Brecon, may be increased by an amount not exceeding the amount by which the cost of carriage exceeds 15s. a ton; provided that (a) this item is shown separately on the invoice; and (b) that such extra charge shall not exceed 10s. a ton unless a higher limit has been submitted by the prospective buyer and the prospective seller to, and approved by, the Minister of Supply. Applications for the approval of such higher charges

should be made to the Pitwood Department, Clifton Down Hotel, Bristol.

Earlier details of the transport subsidy for home-grown mining timber were given in our issues of September 6, 1940 (page 258), and September 20, 1940 (page 310).

#### Release of Imported Motor Vehicles

The Minister of War Transport has decided to release 700 International Harvester vehicles which he imported from the U.S.A. Applications for licences to acquire these vehicles should be made to the Regional Transport Commissioner for the Region in which the vehicles are to be used. About 100 chassis of 6 to 7-ton lorries, and 100 chassis of the 10-ton articulated vehicle, are immediately available, while 300 6 to 7-ton lorries are being fitted with three different types of bodies, namely, timber drop-side, fixed steel side, and flat platform; 200 articulated vehicles are being given drop-sides or flat platform bodies. The prices of the chassis are £710 for a lorry, and £1,275 for the articulated vehicle. The cost of the bodies will be additional, ranging from £80 to £100 each. Full particulars of the specification of the chassis may be obtained from the International Harvester Co. of Great Britain Ltd., 259, City Road, London, E.C.1.

#### London Transport Summer Alterations

This summer's London Transport timetables for road services show a saving of some 360,000 miles a week compared with last year's. The programme is based on the need for economy in the use of petrol, fuel oil, and tyres, and any improvements in services are directed to the needs of factories engaged on war production. Special journeys are being run where required for late workers, and the Underground railways continue to run up to a late hour. The changes on the Central buses were made on March 25, and on trams and trolleybuses on April 1. On the Country buses there were no changes apart from a few service adjustments, and on Green Line coaches no changes. On the Central buses the evening services and times of last vehicles remain substantially unaltered, the last buses from Central London leaving at approximately 10.30 p.m. The last Green Line coaches continue to leave Central London at approximately 8 p.m.; and last coaches to London from Country points at approximately 6 p.m.

#### The Removal of Woolwich Arsenal

Details were revealed recently of a transport achievement in connection with the removal of Woolwich Arsenal. When the British Army was evacuated from Dunkerque it was decided to move the whole of the vast stores at Woolwich Arsenal in expectation of intensive air raiding. A scheme scheduled to take a year or more for the dispersal of supplies over the countryside had barely begun to work, and the construction of a large depot in a more remote part of the country, although under way, had reached the state in June, 1940, that only one shed was ready for occupa-

tion  
Con  
the  
tha  
an  
poi  
con  
who  
Wh  
at

T  
for  
The  
outb  
Th  
whic  
15, 1  
tion,  
A  
Burs  
Th  
L.N.  
A  
and  
Fu  
Stati  
arriv  
Kirk  
Th  
been  
Girva  
Sec  
L.M.S.  
Min  
L.M.S.  
Bro  
and C  
Branc

As  
the la  
1923  
some  
from  
left-ha  
the ve

M

Port A  
YE  
S

Sketch  
Japan  
and s

SO  
19

Sketch  
Japan  
and s

tion. During the summer of 1940 the Royal Army Ordnance Corps engaged in a day and night race against time to remove the contents of Woolwich Arsenal, and for three weeks no fewer than 15 train loads a day were despatched, in addition to large numbers of motor convoys. At one time the railway authorities pointed out that there was a risk of the railway becoming hopelessly congested at an important junction. The R.A.O.C. sent there the whole of its available staff and cleared 500 wagons in 48 hours. When the intensive air raiding did come, the total losses sustained at Woolwich Arsenal are stated to have been only some binoculars.

#### Recent Passenger Service Changes

The Lostwithiel and Fowey branch of the G.W.R. was reopened for passenger traffic on weekdays only, on and from February 9. The passenger service on this line was withdrawn shortly after the outbreak of the war.

The passenger service on the Golden Valley Railway, G.W.R., which extends from Pontillas to Hay, was withdrawn on December 15, 1941. Latterly it consisted of one morning train in each direction, on weekdays only.

A new Southern Railway halt known as Hamble, situated between Bursledon and Netley, was brought into use on January 18.

The passenger train service on the Millerhill and Dalkeith branch, L.N.E.R. (N.B. Section), was withdrawn on January 5 last.

A new L.N.E.R. halt known as Donibristle, between Inverkeithing and Aberdour, was opened for traffic on March 2 last.

Full service has been restored into and out of Liverpool Exchange Station, L.M.S.R., and trains which previously began from and arrived at Kirkdale Station are extended into the terminus, with the Kirkdale stops in many cases deleted.

The train service between Girvan and Turnberry, L.M.S.R., has been replaced by Western S.M.T. motorbuses, between Turnberry Girvan, and Maybole.

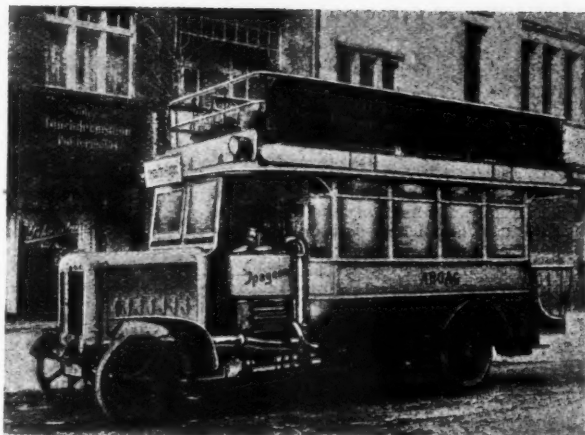
Scotby Station on the Midland Section Settle-Carlisle main line, L.M.S.R., has been closed for traffic.

Minshull Vernon Station on the L.N.W.R. Section main line L.M.S.R., was closed for all traffic on and from March 2.

Broughton Cross Station on the Workington-Cockermouth line, and Cledford Bridge and Billinge Green halts on the Northwick Branch (L.N.W.R. Section), were closed for traffic on March 2 last.

#### Berlin Producer-Gas Buses in 1923

As a result of the high cost of heavy fuel oils in Germany after the last war, the old Berlin General Omnibus Company arranged in 1923 with Julius Pintsch (the famous gas lighting firm) to run some of its double-deck buses on producer-gas. As may be seen from the accompanying illustration, the plant was arranged on the left-hand side (in Germany the off-side) of the driver's seat. When the vehicle was at work on town routes, charcoal was used as fuel.



Double-deck Berlin bus propelled by producer-gas, which was introduced into experimental service as long ago as 1923

but anthracite or coke were used on open roads. The fleet name ABOAG comprised the initial letters of the company's name—Allgemeine Berliner Omnibus Aktien Gesellschaft.

#### Drastic Curtailment of Road Transport in Eire

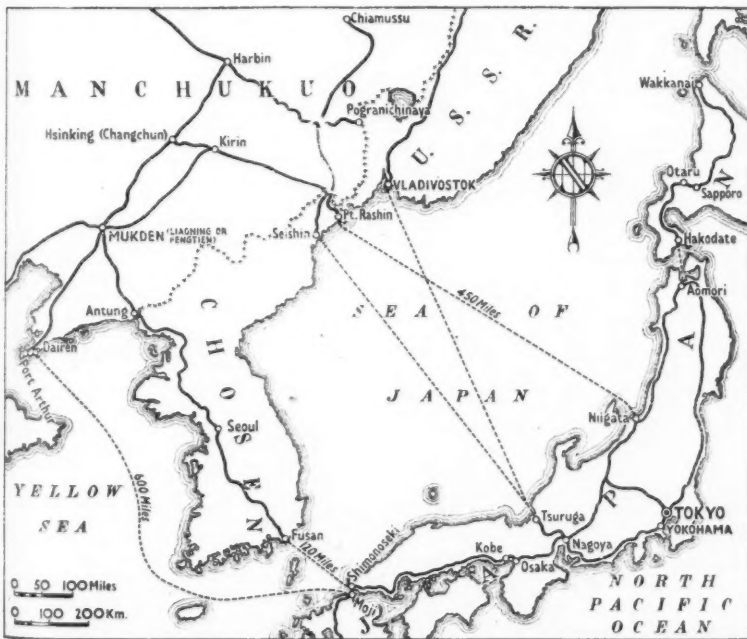
The three principal operators of passenger road transport in Eire, namely, the Great Southern Railways, the Great Northern Railway (Ireland), and the Dublin United Transport Co. Ltd., recently announced that, at the request of the Government, reduced schedules were being brought into effect. The reasons are the impossibility of importing rubber, and the need for conserving tyre stocks. Of the railway-owned services, many long-distance petrol-driven buses are being taken off, and communication by road is being maintained only on short routes between towns and connecting railheads. Motor drivers have already been instructed to observe a maximum speed of 35 m.p.h. In the Dublin area, the first part of the curtailment programme came into force on Monday last, April 13, and involved the discontinuance of some services, and the shortening of others. The more widespread reductions, constituting the second part of the programme, will take effect on April 27. Further routes will be curtailed; slack-hour services will be reduced considerably so as to maintain present frequencies during peak periods; Sunday afternoon services will be reduced; and the last buses from the City centre on all routes will leave at 10 p.m.

#### World Time Changes

Summer time will be introduced in Switzerland on May 4, this year at 1 a.m., it is officially announced. This is also the date of the new summer railway timetable on the continent.

The clocks in Portugal were put forward one hour on March 14 and double summer time will be established on April 25. On August 15 the clock will be put back one hour, and Greenwich mean time will be restored on October 24. This is the first experiment with summer time to be made in Portugal; the step has been made with a view to achieving fuel economy.

Daylight saving time (or summer time) was established by law throughout Canada and the U.S.A. on February 9 (see our issue of March 20, page 406). Such time is, therefore, used throughout the railways, and the published timetables accord with the public clocks. Heretofore, summer time has been a matter of local option (adopted mainly in the large towns), and railway timetables have been prepared according to Standard (non-summer) time. In towns using summer time there has therefore been a difference of one hour between the public clocks and the railway timetables (See editorial note at page 473.)



Sketch map showing the position of Vladivostok in relation to Japan and Japanese-occupied Manchukuo and Chosen (Korea). The principal railway and shipping routes are indicated; the sea distances are in nautical miles



# MINISTRY OF WAR TRANSPORT ACCIDENT REPORT

## Beighton, L.N.E.R., February 11, 1942

Mr. J. L. M. Moore inquired into the accident which occurred near Beighton Station, L.N.E.R., at 9.56 p.m. on February 11, 1942, when a troop train, of 13 vestibuled bogie coaches and two 4-wheeled vans in rear, drawn by a 4-6-0 mixed-traffic locomotive and conveying 400 military and naval personnel, travelling at about 35 m.p.h. between Killamash and Beighton Stations, came in contact with a steel plate projecting from a wagon in Holbrook No. 1 colliery siding. The fifth, sixth, and seventh vehicles belonged to the Southern Railway and had steel-panelled bodies; the remainder were L.N.E.R. stock with steel underframes and wood bodies. The plate, dislodged during some shunting, was lying almost flat and penetrated deeply into the sides of several coaches. In the sixth and, to a lesser extent, the seventh, partitions were displaced laterally, forcing out portions of the opposite sides. As far as is known the sailors escaped injury, but 14 soldiers were killed or fatally injured and 35 severely injured. Brake-pipe damage pulled the train up with its rear 600 yd. in advance of the point of impact and within a few seconds a mineral train passed in the opposite direction, but this is not thought to have materially affected the number of casualties, although several men had fallen into the 6 ft. space from the sixth vehicle, the protruding side of which was struck by the mineral train. Had that train passed a few minutes later some of the injured men would have been picking themselves up and others alighting. Rescue work was promptly organised by Stationmaster Edgar Allan, Beighton, to whom great credit is due. Ambulances speedily arrived and by midnight all the seriously injured had been removed to hospital. Ample assistance was available as it was the railway and colliery change-duty hour. The night was fine but dark, with a sharp frost.

### Loading and Shunting of Plate Wagon

The plate concerned was one of seven, each measuring 9 ft. 6 in. by 8 ft. 7 in. and  $\frac{1}{2}$  in. thick, weighing 25 cwt., in transit from Frodingham to West Tinsley and loaded on a 20-ton L.N.E.R. plate wagon, inside width 8 ft. 4 $\frac{1}{2}$  in., length 27 ft., sides 1 ft. 2 in. high. Lengthwise loading of plates, having one edge on the floor and the other on the opposite side, with packing pieces placed vertically between the lower edges and other side has been the accepted practice for many years for plates a few inches wider than the inside width of the wagon. (Plates over 8 ft. 8 $\frac{1}{2}$  in. wide have to be loaded on edge in vehicles fitted with special trestles and secured by binding chains, etc.) In this instance the plates were loaded in two piles, of four and three, 6 ft. apart, and to distribute the load their upper edges were placed on opposite sides of the wagon; the usual packing pieces were used.

After the accident it was found that displacement of the latter had allowed the pile of four plates (at the Beighton end of the wagon) to fall inside. They were lying almost flat on the floor, having slightly forced out the sides, as a result, it is considered, of vibration during the journey to Holbrook sidings, aggravated perhaps by the final movement of the wagon there. The two lower plates of the other pile were still resting on the side of the wagon adjacent to the main line

but the upper one was missing. This had evidently moved with the others towards the centre of the vehicle and, making contact with the pile of plates, swung round over them. It came to rest at their end of the wagon with one corner protruding 2 ft. 9 in. towards the main line. In this condition it caught the handles of the first and second coaches of the troop train. The third coach missed the plate but the middle of the fourth was struck by it, causing it to rotate and cut more deeply into the side of the fifth. The plate was probably then dragged from the wagon and, forcing a truck off the siding, became embedded in the sixth vehicle for about 6 ft., the maximum penetration experienced. The plate cut through the sides of the seventh and eighth coaches and, coming opposite a low-sided wagon, it freed itself and eventually came to rest on another truck. Fortunately the corridors of the sixth and seventh coaches were on the damaged side, or casualties would doubtless have been greater.

The plates had been loaded by experienced men at Frodingham on February 8 and were dry at the time. An examiner passed the wagon before the railway staff took charge and it was doubtless scrutinised by others before it left on February 11; because it was an ordinary load it did not call for special attention during transit. It was last seen in daylight at Broughton Lane sidings and formed part of a train from there under Guard Walter Helliwell, who later handled it at Holbrook sidings, where it arrived at 8.15 p.m. and was backed across the down line there to No. 3 siding. Guard L. H. Calladine was acting as shunter and instructed Helliwell to control the vehicles into the sidings. At length only the plate wagon and a common user remained attached to the engine. The former was loose-shunted and Helliwell stated that he had to break into a gentle run to lower the brake lever, which he did without difficulty. Neither man heard anything unusual when the plate wagon made contact with the other vehicles in No. 1 siding. Soon after the engine was released and Helliwell travelled on it along the main line, but in the darkness neither he nor the enginemenn noticed anything amiss with the plate wagon as they passed it. Calladine, touring the yard on leaving, did not pass along the somewhat narrow passage between siding and main line—7 ft. 2 in. between rails at the point where the wagon stood—or he would doubtless have seen the overhanging plate. A goods train followed the light engine without incident, after which came the ill-fated train. Notwithstanding certain evidence to that effect, Mr. Moore considers it doubtful whether there was anything amiss with the load when it reached Broughton Lane. It could not have been overhanging more than 1 ft. 2 in. there, or it would have marked a retaining wall on the way to Holbrook sidings.

### Inspecting Officer's Conclusions

Mr. Moore concludes that the movement of the plate occurred during the loose-shunting at Holbrook, where the force of impact was governed by the shunting speed and Helliwell's application of the brake. (There is the remote possibility that the brake lever reseated itself on the rest.) Evidence shows Calladine to

have been shunting cautiously. Both brake levers were found on their respective rests after the accident, pointing to the fact that Helliwell did not apply the brake. Tests made by Mr. Moore, in which the two men took part, with a similar load showed that the wagon when braked would stop well short of the end of the original train in the siding. With no brake action it came into sharp, but not unduly excessive, contact with it. The three plates in the rear of the wagon slid forward and struck the other four, swinging round towards the main line and leaving the upper, middle and lower projecting 1 ft. 2 in., 5 in., and 4 $\frac{1}{2}$  in. over the wagon side. The tests proved to Mr. Moore's satisfaction that the brake was—for whatever reason—not applied on the night of the accident. Helliwell either did not attempt to manipulate the lever, possibly on account of the darkness and conditions underfoot, or failed to lift it and give the necessary lateral pull for it to clear the rest and fall in the guide. (It was noticed during one of the tests that he appeared to experience some difficulty.) A considerably faster shunt may also then have been made, but the fact that the plate shifted further is not necessarily proof of that. A wagon would run more freely at the end of a journey and the plate would slide more readily under frosty conditions. Responsibility for the accident rests with Helliwell. He is past 60 years of age and not over alert in mind or body. The extent of blame must not be judged by the results. A man controlling wagons into sidings in such circumstances has to consider, in the few moments during which the vehicle is within the light of his hand lamp, its speed, the type of brake fitted and what is required of him to ensure that it comes to rest at the desired point. He also has to be prepared to decide, in the event of difficulty with the brake lever, whether in the interests of his own safety, he would be justified in abandoning the attempt at braking, and allow the wagon to run. The load in this instance, and class of traffic usually found in the sidings, were such that Helliwell had no cause to anticipate serious results from letting the wagon run. He may have been influenced accordingly, because of the unfavourable conditions underfoot.

### Recommendation

Apart from establishing responsibility, the tests had the advantage of revealing the surprisingly slight impact required to move the plates and the consequent risk incidental to the method of loading. After careful consideration, it was agreed that there was no practicable means of making secure loads carried in this manner, and there was no alternative but to recommend the immediate discontinuance of the existing practice. The representatives of the company readily concurred in this view, and not only were orders to this effect issued forthwith throughout the L.N.E.R., but advantage was taken of the meeting of the R.E.C. Operating Committee, on the following day, to pass on to representatives of the other companies the circumstances of this accident, and the steps taken to guard against a recurrence.

Clearances between No. 1 siding and the main line at Holbrook are not in accordance with modern practice. Had there been the full 9 ft., required in new works, the accident would not have occurred. The desirability of maintaining this standard so far as possible is emphasised by this regrettable occurrence.

## RAILWAY AND OTHER MEETINGS

### Midland Railway Co. of Western Australia

The annual general meeting of the Midland Railway Co. of Western Australia Ltd. was held at Winchester House, Old Broad Street, E.C.2, on April 13. Mr. William Sandford Poole, Chairman of the company, presided.

The Secretary, Mr. John S. Lewis, having read the notice convening the meeting and the auditors' report.

The Chairman said that the accounts for the year to June 30, 1941, showed an appreciable improvement over those of the previous year. The gross traffic receipts for the year were £183,558, as compared with £155,899 for the previous year, an increase of £27,659, and the working expenses, at £85,858, were increased by only £3,290, as against those of the previous year. The net traffic receipts were £97,700, as compared with £73,331 in the previous year, an increase of £24,369, which he thought very satisfactory in these difficult times. There had been run 25,927 additional train miles. The outstanding feature of the year's operations was an increase of 33 per cent. in net earnings, and the train mileage had increased by only 10 per cent. Operating costs were about 4 per cent. higher, due largely to wage awards by the Arbitration Court.

All main sources of traffic, namely, passenger, goods, and livestock, contributed to the increase in gross earnings, which included the movement of both passengers and material in preparation for the defence of the country. A fair proportion of the increased earnings in livestock traffic was due to the unusually severe drought conditions experienced in Southern and South-Western districts of the State, which necessitated the transfer of large numbers of sheep to the company's territory, where feed was more plentiful.

Wheat transported totalled 50,367 tons, compared with 46,658 in the previous year, an increase of 3,709 tons. Of the total tonnage transported, 94 per cent. was conveyed in bulk, as against 90 per cent. in the preceding year. Wheat deliveries to railway sidings for the 1940-41 season totalled 52,589 tons, as against 68,255 tons for the 1939-40 season. The quantity of wheat stored at June 30, 1941, in silos along the railway, was approximately 29,236 tons. This had since been cleared.

The gross traffic receipts were the highest since 1930. The improved results for the year reflected great credit on the management, and thanks are due to Mr. Jackson, the Local Director, to Mr. Drake, who was in charge of the railway department, and to his staff in all grades, for their good services to the company.

The revenue account for the year showed a credit balance of £92,508, compared with £68,865 for 1939-40; an increase of £23,643. The amount expended during the year under the heading of renewals, principally for renewing rails, sleepers, bridges, culverts, and rolling stock, and for re-ballasting, was £46,572, as against £41,528 in 1939-40. A sum of £45,000 had been allocated from the past year's revenue to depreciation and renewals account, increasing it to £98,991, and after the deduction of the £46,572 expended during the year, the balance remaining at the credit of that account was £52,419.

The loss on exchange for the year was £8,929, as against £5,102 for 1939-40; the increase of £3,827 was due to the larger amount of earnings remitted from Australia to London. The balance on exchange contingency account remained at £30,000. After making the allocation of £45,000 for depreciation and renewals, providing for Australian and British taxation, and interest on the first mortgage debenture stock, there remained a balance of £38,408. Adding thereto £44,087, the amount brought forward from the previous year, the total at credit of the revenue account was £82,495. Interest on the second mortgage cumulative income debenture stock at the full rate of 5 per cent. for the year required £29,618, leaving a balance of unappropriated revenue of £52,877. The directors felt they would be justified in recommending the declaration of a dividend of 2½ per cent. on the unified ordinary stock, which, after deduction of income tax at 10s. in the £, required £7,414. By the terms of the trust deed

securing the reversionary certificates it was provided that one-sixth of the net profits divided should, subject to deduction of income tax, be applied towards the redemption of these certificates. The balance to be carried forward was £43,980.

The season had been good and the harvest should yield a greatly increased quantity of wheat. The wool clip, which had been bought by the British Government, should also be higher in quantity and better in quality. He would not be expected to make any forecast as to the outcome of the company's current year. Latest advices reported railway gross receipts for the five months ended November 30 at £103,592, an increase of £24,707 over those for the corresponding period in the previous year, but working expenses were higher. Under National Security regulations, the Railway Commissioners had been appointed to control the railways in the respective States, and consequently the company's railway would be temporarily under Government control. The Controller had intimated that, until otherwise directed, the railway should continue under the existing administration.

The report and accounts were adopted.

## Staff and Labour Matters

### Road Passenger Transport Wages

The National Council for the Omnibus Industry, having failed to reach agreement on the claim presented by the trade unions for an increase of 9s. a week in the war wage paid to workpeople in the industry, the matter was referred to arbitration and the award provides—

- (1) That the war wage payable to all male and female employees concerned be increased from the hourly rates set out in the award of July 10, 1941, to the rates set out in the following scale:—  
To employees concerned—  
(a) Of age 21 years and over... 3½d. an hour.  
(b) Of ages 19 and 20 ... 2½d. "  
(c) Of ages 17 and 18 ... 1½d. "  
(d) Of ages 14 to 16 inclusive ... 1d. "
- (2) That the full hourly rate of war wage shall rank for overtime, Sunday labour, and all other work for which extra payment above the hourly rate would normally be paid.
- (3) That the rates fixed by the award shall be operative as from the beginning of the first full pay week following March 18, 1940.
- (4) That nothing in the award shall be deemed to alter or affect the basic hourly rates of pay now in force for the several classes of employee.

Provision is made in the award that any company party to the arbitration may appeal against the application of the award in whole or in part of its undertaking on the ground of special circumstances prevailing in the undertaking.

Under an agreement between the employers and the Transport & General Workers' Union, employees of road passenger transport undertakings in Scotland, which are not covered by the National Council for the Omnibus Industry, or by the National Joint Industrial Council for the Road Passenger Transport Industry (which caters for the municipally-owned buses), have also received an addition of 4s. a week to the war wage at present paid, making a total war wage of 15s. for male adults. The war wage of employees of municipally-owned bus undertakings and of the London Passenger Transport Board

having previously been increased, the whole of the road passenger transport industry is now paying a war wage of 15s. a week to male adults with proportionate amounts for females and juniors.

### Motor Vehicle Repairing Industry Wages

Under an agreement between the Motor Agents' Association and the trade unions the minimum wage rates as specified in the wages agreement of October 2, 1941, for adult male workers employed in the motor vehicle repairing industry are increased by 1½d. an hour.

The new minimum rates are as follow:—

	London Area		Provinces	
	s.	d.	s.	d.
Skilled craftsmen ...	1	10½	1	9½
Semi-skilled ...	1	8½	1	7½
Other workers ...	1	6½	1	5½

Apprentices, boys and youths are to be paid the following percentages of the skilled workers' rates:—

Age	Percentage
16 ...	30
17 ...	35
18 ...	47½
19 ...	55
20 ...	65

### Production Committees

Much has been said recently in connection with the setting up of joint committees of employers and workers in engineering and other establishments for the purpose of discussing questions affecting production and following the lead given in the Royal Ordnance factories, where such committees are now being elected, the Engineering & Allied Employers' National Federation, the Amalgamated Engineering Union, the National Union of Foundry Workers and the Confederation of Shipbuilding & Engineering Unions have reached agreement on the establishment of joint production, consultative, and advisory committees in the engineering industry.

The railways have for many years, by agreement with the trade unions, had shop and works committees consisting of representatives of the workpeople and the companies' local officials.



## Questions in Parliament

### Travel Facilities

The travelling facilities provided for the Pilton Estate have been carefully considered by the Regional Transport Commissioner in conjunction with the authorities of the Edinburgh City Corporation and of the London Midland & Scottish Railway company. There is a frequent bus service running through the heart of the Estate and a special census, which was recently taken, showed that the service was adequate. I regret therefore that I should not be justified in pressing the local transport authorities to provide further facilities. (Mr. P. J. Noel-Baker, Joint Parliamentary Secretary, Ministry of War Transport, March 24.)

### Producer Gas Vehicles

I received last week an interim report from the technical committee on the development of producer gas vehicles, and the report of Lord Henley's committee on fuels suitable for this purpose has just been completed. It is not yet possible to make a full statement on the steps to be taken to encourage the uses of alternative fuel, but these reports on producer gas are being closely examined, in relation to other methods of reducing the imports of oil. (Mr. D. R. Grenfell, Secretary for Mines, March 24.)

Private motor cars fitted with producer gas plants may not be used for pleasure purposes after the discontinuance of the basic petrol ration. (Mr. Geoffrey Lloyd, Secretary for Petroleum, March 24.)

### Second-Hand Commercial Vehicles

I have received no information that leads me to think that profiteering in second-hand commercial vehicles is widespread, though instances are brought to my notice from time to time. In flagrant cases, if it appears that the efficiency of the war effort may be hampered, the Minister of War Transport would be prepared to requisition vehicles offered for sale at unreasonably high prices. (Mr. R. J. Noel-Baker, March 25.)

### Booking Office Delays

The rate at which railway tickets can be issued is governed primarily by the amount of accommodation and the number of staff available. Within these limitations, all possible steps are already being taken to secure that there is no avoidable delay at congested stations. Many passengers now travel on vouchers or warrants which have to be scrutinised, appropriate tickets issued, warrants endorsed, and various entries made. This inevitably causes delay at booking offices. (Mr. P. J. Noel-Baker, March 25.)

### Overtime Pay in Ministry

The total paid for overtime worked in the Ministry of War Transport during the month of December last was £12,300. It has not been found necessary to alter the existing arrangements for the supervision of overtime, but supervising officers are instructed to restrict overtime to the minimum necessary for the adequate discharge of the work. (Mr. P. J. Noel-Baker, March 25.)

### Petrol Price

The factors which recently necessitated an increase in the price of petrol of 1d. a gallon were an increase in f.o.b. costs and ocean freights. (Mr. Geoffrey Lloyd, March 25.)

### Travel for Service Cadets

Arrangements are being made for part-time cadets of the fighting services, when travelling to their headquarters, local centres, or camps, in connection with their

training, to obtain reduced fares on presentation of an appropriate voucher. The arrangements will come into operation as soon as details have been settled. (Mr. P. J. Noel-Baker, March 25.)

## Railway and Other Reports

**Metropolitan Assented Stock.**—An interest payment for the year to December 31 last at the rate of 3½ per cent. was made on April 4.

**North Devon & Cornwall Junction Light Railway Company.**—The Southern Railway Company has worked this line under the agreement of April 7, 1922, and the net revenue for 1941 is £6,614. After payment of interest on the £130,000 of 5 per cent. debenture stock and an adjustment in respect of income tax, the amount to be carried forward is £916.

**Trent Motor Traction Co. Ltd.**—This subsidiary of the L.M.S.R. and L.N.E.R. companies and of Tilling & British Automobile Traction Limited reports a revenue for 1941 of £692,077 (£587,453), expenses of £619,683 (£498,125), including depreciation £61,618 (£60,798), and taxation £116,000 (£39,000), leaving a balance of £72,394 (£89,327). Adding £27,229 brought forward gives a total available of £99,623. General reserve again receives £20,000, and the final dividend is 6 per cent., making 10 per cent. for the year (same) and leaving £25,594 to be carried forward. A sum of £13,657 realised on the sale of certain assets has been placed to general reserve.

**Northern General Transport Co. Ltd.**—The directors of this subsidiary of the London & North Eastern Railway Company and of British Electric Traction Co. Ltd. recommend a dividend of 10 per cent. (the same) for the year 1941. Total revenue for the year amounted to £1,056,072, against £822,635, and the total expenses, including war damage insurance, renewals, deferred repairs, and taxation were £909,366, compared with £663,533, leaving a surplus on working of £146,706 (£159,102). Allocations are made to reserve £40,000 (£50,000), and to employees' assistance fund, £3,000 (the same), and the amount carried forward is £76,824, against £75,726 brought in.

**Grand Union Canal Carrying Company.**—Interest is to be paid on the 6 per cent. mortgage debenture stock for the year to November 30, 1941, at the rate of 3 per cent. plus 3 per cent. additional. For the period April 1 to November 30, 1940, the payment was 3 per cent. plus 1 per cent. additional.

**British Insulated Cables Limited.**—After allowing for taxation, but before depreciation, the profit for the year 1941 amounted to £810,385. Net earnings, after providing for depreciation and debenture interest, were £810,385 (£786,232). A sum of £100,000 is again put to war contingencies reserve, and the dividend distribution of 20 per cent. on the ordinary for the year is the same as for 1940.

**John Baker & Bessemer Limited.**—For the year 1941 the profit, after depreciation and income tax to date, was £81,731 (£78,712). After deducting £56,231 (£47,798) for E.P.T. and for income tax payable in January, 1943, there is a net profit of £25,500 (£30,914). Preference dividend for the year takes £7,820 and the ordinary dividend recommended for the year is again 10 per cent., less tax, requiring £12,398. A sum of £4,814 (nil) is

appropriated to war damage insurance, leaving £20,512 (£20,044) to be carried forward.

**Thos. Firth & John Brown Limited.**—A final dividend of 5½ per cent. is recommended, making with the interim a total of 10 per cent., tax free, on the ordinary shares for the year 1941. For 1940 the final dividend was 6½ per cent., making 12½ per cent., tax free. Net profit for 1941, after providing for directors' fees, interest, depreciation, taxation, deferred repairs, war damage contribution, and contingencies, amounted to £307,236 (£390,822).

## British and Irish Railway Stocks and Shares

Stocks	Highest 1941	Lowest 1941	Prices	
			April 10 1942	Rise, Fall
G.W.R.				
Cons. Ord. ....	43½	30½	41	— ½
5% Con. Pref. ....	109½	83½	114½	—
5% Red. Pref. (1950) ..	105½	96½	108	—
4% Deb. ....	113½	102½	114½	—
4½% Deb. ....	115	105½	116½	—
4½% Deb. ....	121½	112	123½	—
5% Deb. ....	132	122	135	—
2½% Deb. ....	70	62½	72	—
5% R. Charge ....	129½	116	132½	—
5% Cons. Guar. ....	128	110½	129½	—
L.M.S.R.				
Ord. ....	17½	11	17½	— ½
4% Pref. (1923) ....	53	33½	53	—
4% Pref. ....	68½	48½	72	—
5% Red. Pref. (1955) ..	97½	77	97½	—
4% Deb. ....	105½	97	106½	+ ½
5% Red. Deb. (1952) ..	110½	106½	109½	—
4% Guar. ....	100	85½	102½	—
L.N.E.R.				
5% Pref. Ord. ....	3½	2½	3½	— ½
Def. Ord. ....	2	1½	1½	— ½
4% First Pref. ....	52½	33	52	—
5% Second Pref. ....	19½	10	20	—
5% Red. Pref. (1955) ..	79½	52	88	+ 1
4% First Guar. ....	90½	74½	97½	+ 1
4% Second Guar. ....	80½	59	83½	+ 1
3% Deb. ....	79½	68½	82	—
4% Deb. ....	104	91½	105	—
5% Red. Deb. (1947) ..	106	102½	104	—
4½% Sinking Fund Red. Deb. ....	103½	99½	103½	—
SOUTHERN				
Pref. Ord. ....	65½	43½	63½	—
Def. Ord. ....	15½	9	15	—
5% Pref. ....	107	77½	111½	—
5% Red. Pref. (1964) ..	107	89	107	—
5% Guar. Pref. ....	128	111	129	—
5% Red. Guar. Pref. (1957) ....	114½	107½	113½	—
4% Deb. ....	112	102½	111½	— 1
5% Deb. ....	130	119	134	—
4% Red. Deb. (1962- 67) ....	108	102	108	—
4% Red. Deb. (1970- 80) ....	108½	102½	108½	—
FORTH BRIDGE				
4% Deb. ....	99½	90½	103½	—
4% Guar. ....	99	85½	103½	—
L.P.T.B.				
4½% "A" ....	120½	101½	121½	—
5% "A" ....	130	115	130	—
4½% "T.F.A." ....	103½	99½	102½	+ ½
5% "B" ....	117	102	119	—
"C" ....	46½	28½	40½	+ ½
MERSEY				
Ord. ....	24½	19½	21½	—
4% Perp. Deb. ....	100	90	100	—
3% Perp. Deb. ....	73½	63	75	—
3% Perp. Pref. ....	58	51½	58	—
IRELAND				
BELFAST & C.D.				
Ord. ....	4	4	9	+ 5
G. NORTHERN				
Ord. ....	14½	3	15	+ 1
G. SOUTHERN				
Ord. ....	14½	5	11	—
Pref. ....	17	10	17½	+ ½
Guar. ....	44	16	39	—
Deb. ....	61	42	59½	— ½



## NOTES AND NEWS

**Agreed Charges.**—Fifty more applications for the approval of agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection must be filed on or before April 17.

**Leopoldina Railway Co. Ltd.**—The directors announce that the new scheme of arrangement providing a moratorium on the 4 per cent. debenture stock, the 6½ per cent. terminable debentures, and the guarantee to the Leopoldina Terminal Co. Ltd. has now received the sanction of the Court.

**Great Southern Railways (Ire).**—For the 13th week of 1942 the Great Southern Railways (Ire) reports passenger receipts of £38,091 (against £36,633), and goods receipts of £58,401 (against £50,311), making a total of £96,492, against £86,944 for the corresponding period of the previous year. The aggregate receipts to date are passenger, £408,613 (against £372,260), goods, £791,121 (against £655,353), making a total of £1,199,734 (against £1,027,613).

**Powell Duffryn Steam Coal Co. Ltd.**—At an extraordinary general meeting of the company held on April 1, the scheme for the acquisition by the company of the £1,831,457 4½ per cent. preferred ordinary stock and the one-half (£2,539,008) of the ordinary stock not already owned by this company in Welsh Associated Collieries Limited was unanimously approved. The Chairman reported that the offer had already been accepted in respect of more than 90 per cent. of the stock of each class.

**Abandonment of U.S.A. Railways.**—During 1941, 14 complete railways were abandoned in the U.S.A., 3 below the highest total of 17 to date, which was reached in 1939. The largest complete system scrapped during 1941 was the Wichita Northwestern, with 99 miles, and the Missouri Southern came next with 54 miles. During the 9-year period from 1932 to 1940 inclusive, a total of 14,808 route miles of Class 1 railways was abandoned; much of this mileage comprised branch lines of existing systems. (See editorial on page 476.)

**Bolivar Railway Extension.**—The new line constructed by the Venezuelan Government, from El Palito on the system of the Puerto Cabello & Valencia Railway Co. Ltd. to Barquisimeto, the terminus of the Bolivar Railway Co. Ltd., was inaugurated by the President of the Republic of Venezuela on March 22. It is 54 km. (33½ miles) in length on the 3 ft. 6 in. gauge, the same gauge as that of the Puerto Cabello & Valencia system, which is worked by the Bolivar Railway Company. Direct communication is provided by the new line between Barquisimeto, Puerto Cabello, Valencia, and Caracas.

**Bengal Doonars Railway Co. Ltd.**—Pursuant to Section 235 of the Companies Act, 1929, a general meeting of the members of this company will be held at 307, Winchester House, Old Broad Street, E.C.2, on Thursday, May 7, at noon. Section 235 provides that in the event of the voluntary winding up of a company continuing for more than one year, the liquidator shall summon a general meeting of the company at the end of the first year from the commencement of the winding up, and of each succeeding year, or as soon thereafter as may be convenient, and shall lay before the meeting an account of his acts and dealings and of the conduct of the winding up during the preceding year. The railway was taken over by the Government of India as from December 31, 1940, and a

resolution for the voluntary winding up of the company was passed on January 2, 1941.

**Iron and Steel Scrap Order.**—The Minister of Supply has issued the Control of Iron and Steel (No. 21) (Scrap) Order, 1942, effective from April 10, which amends the No. 14 (Scrap) Order by increasing the prices of high-speed steel scrap and magnet steel scrap containing tungsten in proportion to the recent increases in the price of high-speed steel containing tungsten.

**Canadian National Railways.**—Gross earnings during February last were \$24,950,000, an increase of \$4,706,506, and operating expenses were \$21,305,559, an advance of \$3,671,182, leaving net earnings \$1,035,323 higher, at \$3,644,440. Aggregate gross earnings for the two months from January 1, 1942, were \$50,917,000, an increase of \$9,746,539, and the net earnings of \$8,801,552 showed an improvement of \$3,042,041.

**Canadian Pacific Railway.**—Gross earnings for February, 1942, were \$18,238,000, an increase of \$4,131,000, and expenses were \$15,224,000, or \$3,726,000 higher. Net earnings at \$3,014,000 were \$405,000 more than for February, 1941. For the first two months of 1942 gross earnings were \$36,898,000, an increase of \$8,105,000 and the net earnings of \$6,198,000 were \$924,000 greater than for the first two months of 1941.

**Miscellaneous Chemicals Control.**—A special department of the Miscellaneous Chemicals Control at Terminal House, 52, Grosvenor Gardens, London, S.W.1, has been set up to deal with that proportion of the increasing number of raw materials for which the control is responsible and which are required by the paint industry. Mr. C. A. F. Hastlow, General Manager of Docker Brothers, is joining the control, and will be in charge of this new section under the Controller.

**British Insulated Cables Limited.**—Sir Alexander Roger, Chairman of the company, in a statement circulated with the report and accounts, said that there was criticism in the country that manufacturers and machines were not working to the limit. If it was so, he wondered whether it was due to apprehension about post-war conditions. There might be instances where some hesitation had been displayed by managements to shoulder financial responsibility for extensions, but one knew numerous cases where these risks had been taken. Further impetus might be given to production by an inspiring statement from the Government containing a promise that when the victory was won there would be awaiting a fair deal not only for labour, but also for the investing public.

**Joint Bus Working at Keighley.**—The present year is the tenth of joint working in the Keighley area. Keighley—West Yorkshire Services Limited was incorporated on September 2, 1932, to operate the motorbus services previously worked by the Keighley Corporation and by the West Yorkshire Road Car Co. Ltd. in this area. Assets were contributed equally by the two parties, and joint operation began on October 2, 1932. Since then, the share of profits receivable by Keighley Corporation (one-half of the total) have amounted to £130,000 after payment of tax. When the joint undertaking was formed, Keighley Corporation invested £25,000. These figures were

quoted recently by the Chairman of the Keighley Corporation Finance Committee. He also stated that the Keighley share of the past year's profits was £8,456, as compared with £8,490 a year ago. This result, he said, reflected great credit on the West Yorkshire Road Car Co. Ltd. (an associate of the L.M.S.R. and the L.N.E.R.), which is responsible for the actual running of the services.

**G. D. Peters & Co. Ltd.**—The statement circulated by Lord Inverforth, Chairman of the company, with the report and accounts pointed out that during the year the company had obtained a further considerable increase in output, but the rate of gross profit had declined. The crushing burden of taxation prohibited the directors from making any addition to the general reserve fund and the discretionary staff fund. The situation in which the company found itself was not, of course, peculiar to the undertaking, but it did seem a very poor reward for a year of intense effort.

**London Transport Extension of Time Application.**—The London Passenger Transport Board is applying to the Minister of War Transport for an Order under the Special Enactments (Extension of Time) Act, 1940, extending by three years the time now limited by Sections 5 and 27 of the London Passenger Transport Act, 1937, and Sections 29 and 34 of the London Passenger Transport Act, 1939, for the compulsory acquisition of lands, for the provision, maintenance, and equipment of certain trolley vehicles routes authorised by Section 5 of the 1937 Act; for the completion of certain works authorised by Part III of the 1937 Act; for the acquisition of lands authorised to be acquired by the Act of 1936 for the purposes of works sanctioned by that Act at Amersham, Kensington, Gloucester Road Station, and elsewhere; and for the acquisition of lands authorised by Section 23 of the Act of 1939 for improvements to Charing Cross and Trafalgar Square Stations, to the garage at Chalk Farm, and to the omnibus stand at Morden Station.

**London Transport Assessment.**—The Railway Assessment Authority has recently revised the first London Passenger Transport valuation roll containing the rating assessments (operative for the period April, 1936, to April, 1941) of all the "transport hereditaments" of the board. These comprise all the railway and tramway (including trolley bus) properties of the board's system, but not bus and coach property. In the revision of the roll effect has been given to the decision of the Railway & Canal Commission fixing the cumulo net annual value at £945,270. The approximate aggregate net annual value of the properties concerned in the local valuation lists at present is £1,021,000. Although there is a reduction in the total assessment, a number of properties, hitherto not separately assessed, have now been excluded from the transport hereditaments comprised in the roll, and additional rates will be recoverable on these properties back to April, 1936, or the date thereafter on which they first became separately occupied.

## Contracts and Tenders

An inquiry is reported in the United States market for 1,000 32-ft. 30-ton flat wagons for export to Australia.

The Mysore State Railway has placed an order, to the inspection of Messrs. Rendel, Palmer & Tritton, for a boiler for a "YF" class locomotive.

## Railway Stock Market

The trend of war developments continued to have a restrictive influence on business in Stock Exchange markets, where before the Budget, main attention was again centred on high-grade investment securities, under the lead of British Funds. Elsewhere, in most directions, movements in values were small on balance, and a quietly steady tone was maintained in the absence of selling. In accordance with the general trend, home railway prior charges were slightly lower, where changed, and the junior securities again made reduced prices in the absence of improved demand. Various of the higher-yielding preference issues, such as L.M.S.R. 1923 preference, tended to attract buyers on any decline, but they were also slightly lower as compared with a week ago. Debentures and senior preference stocks remained very firmly held, and continued to be in small supply in the market; yields at current prices continue to be considered attractive, bearing in mind the excellent investment merits of these securities. With the inactive conditions now prevailing, it could hardly be expected that home railway securities would move higher, but it would seem that over a period there will be reasonable prospects of a general improvement. The prior charges will be expected to

move somewhat closely with gilt-edged and other high class securities, and the attractive yields on guaranteed stocks of the L.N.E.R. and also on this railway's first preference and on L.M.S.R. 1923 preference, will no doubt bring in buyers when markets become reasonably active. There are, of course, good prospects of dividends on the junior stocks being maintained, in view of the terms of the financial agreement. The question of wage increases will not affect future dividend payments, as this forms a Government liability and does not affect the railways' rental payment under the agreement. It is true that, bearing in mind the many occasions in the past when the reasonable hopes of stockholders have been disappointed, sentiment is inclined to be influenced by uncertainty as to the position that will exist after the war. On the other hand, uncertainty as to this exists in respect to many leading industries, and as to the railways it is clear that when control ends, any further discussions with the authorities will have to give due weight to the right of the companies to earn the standard revenues as laid down in the Railways Act of 1921.

Compared with a week ago, Great Western ordinary stock has eased from 41½ to 41 at the time of writing, but the debentures were maintained, and the guaranteed and preference stocks were also unchanged on balance. L.M.S.R. guaranteed held its recent improvement

to 103, and the senior preference was 71½; at 52½ the 1923 preference was only fractionally lower on balance. L.M.S.R. ordinary stock was 17½, compared with 18 a week ago. The 4 per cent. debentures of the last-named railway showed business around 107. L.N.E.R. second guaranteed attracted attention in view of the good yield, and at 84 was a point higher as compared with a week ago. On the other hand, the first guaranteed was fractionally lower at 96. L.N.E.R. first preference has been maintained around 52 at the time of writing, but the second preference eased slightly to 20. There was an easier tendency in evidence among Southern issues; the preferred ordinary moved back on balance from 63½ to 62½, and the deferred was 14½, compared with 15 a week ago. The 5 per cent. preference was fractionally lower at 11½, as were the 4 per cent. debentures, but the guaranteed stock was maintained at 130. London Transport "C" made the better price of 40½, sentiment having continued to be assisted by the hope that a slightly better dividend may be in prospect owing to the decision to convert the 4½ per cent. T.F.A. stock.

Movements in foreign railway securities were moderately reactionary, and recent improvement in Central Uruguay debentures, San Paulo ordinary and various other issues has been followed by profit-taking. Canadian Pacific issues tended to improve.

### Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1941-42	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to date			Shares or Stock	Prices			
				Total this year	Inc. or Dec. compared with 1941		Totals		Increase or Decrease		Highest 1941	Lowest 1941	April 10, 1942	Yield % (See Notes)
							This Year	Last Year						
South & Central America	Antofagasta (Chili) & Bolivia	834	5.4.42	£ 28,070	+ 8,100	14	£ 280,660	£ 240,350	+ 40,310	Ord. Stk.	10½	3½	9½	Nil
	Argentine North Eastern	753	4.4.42	ps. 144,300	+ ps. 14,900	40	ps. 6,909,800	ps. 5,841,400	+ ps. 1,068,400	Ord. Stk.	4	5	9	Nil
	Bolivar	174	Mar., 1942	4,556	+ 216	13	14,128	11,020	+ 3,108	6 p.c. Deb.	5	8	11	Nil
	Brazil	...	...	...	...	...	...	...	...	Bonds	7½	2½	11	Nil
	Buenos Ayres & Pacific	2,801	4.4.42	ps. 1,601,000	- ps. 337,000	40	ps. 57,193,000	ps. 55,967,000	+ ps. 1,226,000	Ord. Stk.	7½	1½	5	Nil
	Buenos Ayres Great Southern	5,060	4.4.42	ps. 2,746,000	- ps. 42,000	40	ps. 97,354,000	ps. 88,046,000	+ ps. 9,308,000	Ord. Stk.	10½	3½	8	Nil
	Buenos Ayres Western	1,930	4.4.42	ps. 814,000	- ps. 182,000	40	ps. 34,037,000	ps. 30,254,000	+ ps. 3,783,000	Ord. Stk.	9	2½	7	Nil
	Central Argentine	3,700	4.4.42	ps. 1,809,100	- ps. 435,100	40	ps. 70,360,250	ps. 62,654,400	+ ps. 7,705,850	Ord. Stk.	8½	2½	6	Nil
	Do.	...	...	...	...	...	...	...	...	Dfd.	2½	1	3½	Nil
	Cent. Uruguay of M. Video	972	4.4.42	25,094	- 3,347	40	977,619	899,354	+ 78,265	Ord. Stk.	9½	1½	6½	Nil
	Costa Rica	262	Feb., 1942	21,014	+ 2,106	34	180,476	152,672	+ 27,804	Ord. Stk.	15½	9½	13	15½
	Dorada	70	Feb., 1942	10,584	- 1,416	9	21,184	24,200	- 3,016	1st. Db.	97	97	90½	6½
	Entre Rios	808	4.4.42	ps. 235,900	+ ps. 41,200	40	ps. 10,157,000	ps. 8,568,900	+ ps. 1,588,100	Ord. Sh.	6½	1½	5	Nil
	Great Western of Brazil	1,030	4.4.42	8,400	- 600	14	152,800	154,400	- 1,600	Ord. Sh.	11½	1½	5	Nil
	International of Cl. Amer.	794	Feb., 1942	\$154,927	+ \$81,080	8	\$333,440	\$184,198	+ \$149,242	Ord. Sh.	11½	1½	5	Nil
	Interoceanic of Mexico	...	...	...	...	...	...	...	...	1st Pref.	3	6d	1	Nil
	La Guaira & Caracas	22½	Mar., 1942	7,470	+ 1,950	13	19,860	18,995	+ 865	Ord. Stk.	4	1½	4	Nil
	Leopoldina	1,918	4.4.42	32,855	+ 7,292	14	410,955	336,519	+ 74,436	Ord. Stk.	4	1½	4	Nil
	Mexican	483	31.3.42	ps. 627,000	+ ps. 143,800	13	ps. 4,472,600	ps. 4,048,300	+ ps. 424,300	Ord. Stk.	4	1½	4	Nil
	Midland of Uruguay	319	Feb., 1942	12,418	+ 337	34	107,017	94,688	+ 12,329	Ord. Sh.	66½	1½	3½	3½
Nitrate	386	31.3.42	10,972	+ 4,739	13	35,900	26,732	+ 9,168	P. Li. Stk.	43½	29	42½	14½	
Paraguay Central	274	4.4.42	\$3,265,000	+ \$376,000	40	\$136,718,000	\$130,204,000	+ \$6,514,000	P. Li. Stk.	6½	1½	7	Nil	
Peruvian Corporation	1,059	Mar., 1942	89,692	+ 28,663	39	671,716	577,986	+ 93,730	Pref.	6½	1½	7	Nil	
Salvador	100	Feb., 1942	c 157,000	+ c 52,000	34	c 656,172	c 507,683	+ c 148,489	Ord. Sh.	52	24½	45	4½	
San Paulo	153½	29.3.42	32,717	- 5,733	13	447,099	432,858	+ 14,241	Ord. Stk.	52	24½	45	4½	
Taltal	160	Feb., 1942	4,220	+ 1,145	35	35,115	22,510	+ 12,605	Ord. Sh.	1	6½	1½	3	
United of Havana	1,346	4.4.42	57,871	+ 11,457	40	1,102,105	890,354	+ 211,751	Ord. Stk.	2½	1	3	Nil	
Uruguay Northern	73	Feb., 1942	954	+ 51	34	9,900	9,154	+ 746	Ord. Stk.	2½	1	3	Nil	
Canada	Canadian National	23,562	7.4.42	1,279,200	+ 160,400	14	17,203,800	14,058,400	+ 3,145,400	Ord. Stk.	13½	7½	11	Nil
	Canadian Pacific	17,139	7.4.42	903,200	+ 184,200	14	12,432,000	9,801,600	+ 2,630,400	Ord. Stk.	13½	7½	11	Nil
India	Barsi Light	202	Jan., 1942	11,805	- 3,525	45	137,482	135,210	+ 2,272	Ord. Stk.	345	253	336½	5½
	Bengal & North Western	2,099	Feb., 1942	253,950	+ 22,121	22	1,369,985	1,312,583	+ 57,402	Ord. Stk.	101	95½	89½	8½
	Bengal-Nagpur	2,267	20.1.42	279,900	+ 28,764	43	7,860,240	7,124,397	+ 735,843	Ord. Stk.	105½	101½	93½	8½
	Madras & Southern Mahratta	2,939	31.1.42	218,100	+ 27,862	45	6,020,015	5,083,020	+ 936,995	Ord. Stk.	342	290	342½	4½
	Rohilkund & Kumaon	571	Feb., 1942	53,475	- 12,594	22	266,764	286,327	- 19,562	Ord. Stk.	100	87	91½	3½
	South Indian	2,402	20.1.42	134,249	+ 18,493	43	4,273,558	3,670,793	+ 602,765	Ord. Stk.	100	87	91½	3½
Various	Beira	204	Jan., 1942	68,716	- 3,975	17	288,331	272,885	+ 15,446	Ord. Stk.	1½	29½	2½	Nil
	Egyptian Delta	610	20.1.42	12,496	+ 3,975	43	272,885	194,988	+ 77,897	P. Li. Stk.	68	45	35	10
	Manisa	277	Nov., 1941	21,710	+ 5,994	17	103,592	78,885	+ 24,707	B. Deb.	90½	85½	89½	6½
	Midland of W. Australia	1,900	Jan., 1942	71,391	+ 25,823	43	2,557,812	1,834,363	+ 723,449	Inc. Deb.	90½	85½	89½	6½
	Nigerian	2,442	Jan., 1942	471,753	+ 17	17	1,899,961	—	—	—	—	—	—	—
	Rhodesia	2,442	Jan., 1942	471,753	+ 17	17	1,899,961	—	—	—	—	—	—	—
	South Africa	13,291	14.2.42	817,072	+ 113,924	46	35,159,964	31,920,165	+ 3,239,799	—	—	—	—	—
	Victoria	4,774	Dec. 1941	1,250,508	+ 240,622	25	6,627,999	5,615,574	+ 1,012,425	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ¼. Argentine traffic is given in pesos.  
+ Receipts are calculated @ 1s. 6d. to the rupee. \$ ex dividend